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ABSTRACT

The final evaluation report summarizes the FY 1974 operation of the Experience-Based Career Education Program at Far West School (FWS). The report's introduction provides a brief overview of the secondary level program and the evaluation design. Chapter 2 focuses on the procedures for the recruitment and selection of program students, discusses comparison and control student groups, and compares the demographic characteristics of these groups. Chapter 3 deals with program outcome data, discussing students, parents, and resource perceptions, attitudes and opinions about FWS and assessing student achievements. Chapter 4, outcome backup research, considers anthropological observations, an analysis of program components, test-taking attitudes, and staff-program issues. Chapter 5, model development and implementation, examines the formative evaluation of student-related procedures, and the assessment of the FWS instructional system. Chapter 6 provides a summary and conclusions, presenting generally favorable student and parent reactions to the program, and reporting success in achieving most FWS program goals in self-development, career development, and basic skill and interpersonal skill development. The program was also viewed as successful in keeping students in school and achieving community support. (JR)

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FY 1974

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FINAL EVALUATION REPORT FY 1974

VOLUME I

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Final Evaluation Report FY 1974

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Identification of Student Samples

Group A	FWS returning students from 1973-73
Group B	FWS students who entered in fall 1973, selected in spring 1973
Group C	FWS Experimental Group who entered in fall 1973, selected in summer 1973
Group O	FWS students who entered in fall 1973, representing unusual administrative cases
Group OBC	All fall 1973, FWS entrants (Group O, Group B, and Group C combined)
Group W	Entire FWS student population
Group D	Applicants to FWS from Oakland public high schools eligible for FWS but randomly selected for the Control Group for FWS Experimental Group
Group E	Students in Oakland public high schools randomly selected and representative of the total high school population

Published Tests

CMI	Career Maturity Inventory (Crites, John O., *Career Maturity Inventory*. Monterey, California: CTB/McGraw-Hill, 1973)
ITED	Iowa Tests of Educational Development (Chicago, Illinois: Science Research Associates, Inc., 1960)
POI	Personal Orientation Inventory (San Diego, California: Educational Testing Service, 1966)

Other Abbreviations Used in Text

CR	Community Resource	OPS	Oakland Public Schools
DCC	Design Control Committee	RO	Resource Organization
EBCE	Experience-Based Career Education	RP	Resource Person
FWS	Far West School	SAR	Student Activity Report
FWL	Far West Laboratory for Educational Research and Development	SPPS	Student Plans and Perceptions Summary
LC	Learning Coordinator		

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Chapter 1: Introduction

CHAPTER 1: INTRODUCTION

The Far West School offers a program of Experience-Based Career Education (EBCE) to high school students in Oakland, California. This report presents the findings of an evaluation of the Far West EBCE program conducted during the school year 1973-74.

Far West School is operated by the Far West Laboratory for Educational Research and Development (FWL) in cooperation with the Oakland Public Schools. The summative evaluation* reported in this document was conducted by the Research and Evaluation staff of the FWL-EBCE Project, following guidelines provided by the National Institute of Education. Formative evaluation was an integral part of the program development process and, as such, was primarily the responsibility of the development staff, supported by research and evaluation.

An overview of the FWL-EBCE model is presented below, followed by a description of the evaluation design and related activities.

OVERVIEW OF FWL-EBCE

The Far West Laboratory EBCE prototype is a voluntary alternative program of comprehensive, individualized learning, focusing on direct experience in a variety of community settings, to prepare high school students to enter and function successfully in the adult world.

While focusing on the knowledge and skills a person needs to choose, enter, advance, and find satisfaction in a career, EBCE also attempts to provide the essentials of a secondary education by allowing students to pursue traditional academic subjects and develop basic skills through experiential learning--applying concepts and solving real problems in a functional context.

More specifically, a planned, integrated, and cumulative series of experiences, in a wide variety of life and work settings, is designed to provide each student with:

---

*The terminology and distinction made between summative and formative evaluation is employed only sparingly in this report, due to the substantial overlap between the two terms. For purposes of this report, Chapter 5, Model Development and Implementation, can be considered as the operational definition of formative evaluation, emphasizing evidence aimed primarily at improving the program. Chapter 3, Program Outcome Data, can be looked on as summative, emphasizing overall effects of the program relative to program goals and objectives.

1. self-knowledge--realistic aspirations based on accurate appraisals of his or her interests, needs, values, and goals;
2. a broad understanding of the world of work--first-hand information about its obligations, rewards, shortcomings, and requirements;
3. fundamental coping skills--academic, interpersonal, problem-solving, and decision-making--necessary for functioning effectively as a social being in the modern world.

Upon graduation, students receive accredited diplomas through the Oakland Public Schools (OPS), and should have the knowledge and skills necessary to enter college, training programs, or to seek employment.

The program relies on the active participation of a broad representation of the entire community--local schools and agencies, working individuals, parents, and employer organizations.

Far West School learning resources are categorized as follows:

Resource Person. An adult in a work setting who volunteers to share his occupational know-how, seasoned knowledge and skills, his interests, and perhaps his hobbies with a student in a one-to-one relationship. These relationships can vary from a single day's exploration to weeks or months of intensive involvement. A resource person may be a machinist, a lawyer, a journalist, a printer, a bookstore owner, a business executive, a city manager, director of a day-care center, a furniture salesman or a carpenter.

Resource Organization. An employer organization that makes its facilities and staff available to groups of students for series of pre-planned learning activities. These activities are designed to acquaint students with the nature and functions of an entire organization, the interrelationship of jobs and tasks, and to provide them with a variety of hands-on experience.

Community Resource. Those places, agencies, and facilities available to the public, such as museums, courts, city hall, and so forth, that provide additional learning experiences to broaden a student's understanding and perspective of the community at large.

These resources are assembled around career or subject areas in course-like groupings, called packages. The package framework serves to stimulate, focus, and facilitate the planning of individual projects.

Students are to work on specific projects that they plan with one of the three learning coordinators at the school site in a downtown Oakland office building. Each learning coordinator acts as a combination instructor-counselor who decides with the student what type and amount of credit can be obtained through successful completion of a project. Students may pursue activites at any of three levels:

Orientation. One to ten hours to acquaint students with a resource person, his/her career, and work in a given organization. Activities include guided tours, question-and-answer sessions, or meetings with staff who are carrying out their daily work.

Exploration. Ten to forty hours to permit students to study in greater detail an occupation, an issue, or a subject. Students produce some tangible results, such as a research report, an oral description of an occupation or profession, or a photographic essay.

Investigation. Forty or more hours to include on-site training or more intensive personal involvement in performing productive tasks and assignments, plus thorough study of related materials.

It may not be possible for students to fulfill all their high-school graduation requirements during career exploration. To supplement its program, Far West School offers tutoring to students as needed. Experienced tutors provide supplementary help in writing skills, reading comprehension, spelling, basic math, algebra, geometry, and trigonometry. Tutorial sessions are offered to both individuals and small groups. In these sessions students use programmed texts and other tutorial materials, as well as receiving direct teaching help. To the extent possible, work on basic skills is integrated with project activities.

At the time of enrollment, all students are evaluated through grade-placement tests, examination of transcripts, and judgment of student ability by learning coordinators. During the year, further evaluation of student products and self-determination of student needs may lead to a revised schedule of tutoring assistance.

OVERVIEW OF DESIGN

Early in the development of the EBCE program, five goals were defined with the intention to create an educational program that:

1. represents a viable, comprehensive alternative to other secondary programs;
2. makes education more relevant to life in general and to adult employment in particular;
3. integrates general, academic, and vocational preparation of each student;
4. broadens the base of community participation, especially to include the employing sector; and

5. broadens the base of student participation in determining the direction and nature of the educational process.*

This set of goal statements, while in no way outdated, has been succeeded by other sets that represent elaborations or extensions in attempts to cover the developing project, or to describe the developing project with somewhat more specific statements toward which evidence might be gathered. A serious attempt was made to collect evidence to explore the following statements as representing the major goals for the 1973-74 project evaluation. Stated simply, they are:

1. students will progress in self-development, including understanding of their current interests, abilities, values, and limitations relevant to goal selection and achievement; self-reliance; and ability to function responsibly and independently;
2. students will progress in career development, including career awareness and planning;
3. students will progress in development of interpersonal skills;
4. students will make normal progress in development of basic skills, including communications skills, reading skills, and math skills;
5. students will make normal progress toward completion of requirements for credits and toward graduation;
6. a high proportion of students will stay with school; and
7. the program will achieve community participation and acceptance.

Program emphasis for students is (1) on self-development, self reliance, and independence; (2) on development of career awareness and planning skills; (3) on development of interpersonal skills; and (4) on fostering positive attitudes toward learning and persisting in school. Even though these are the prime areas of emphasis for students, it was expected that FWS students would not fall behind in their basic skills; i.e., FWS students would progress at the same rate as comparable students in a traditional school setting. FWS does provide an integrated program of basic skills training, although for the first semester of the year, the tutorial program within the Learning Center had not yet been put in place.

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*These five project goals were stated first in Hood, Paul D. and Banathy, Bela H., An Employer-Based Career Education Model: A Description and an Operational Plan, FWL, January 31, 1972, page 85.

In order to evaluate the goals that have been stated for the project described briefly above, a broad and varied design for the evaluation was employed. The Far West Laboratory EBCE model is an innovative educational program that is essentially individualistic and personal in its treatment of each student, and that is unconventional in its use of community resources, structuring of educational experiences, and management of student activities. Assessment of the outcomes of such a program calls for a multi-dimensional approach involving a variety of instruments, informants, and analytic techniques in order to get a comprehensive picture of how the program works and what its effects are.

Data were collected from students, parents, resource volunteers, professional interviewers, and FWL-EBCE staff. Methods of data collection included external observations, written questionnaires, rating scales, interview schedules, performance samples, and various forms and documents completed by students as part of their instructional program. A list of instruments employed appears in Appendix C. Criteria by which this set of instruments was derived were: relevance to the stated goals, interest in obtaining common data across the four EBCE sites, and hypotheses stemming from observed outcomes in the previous year.

The collection and analysis of data used primarily for making improvements in the program were also varied, and are explained in Chapter 5. The use of evaluation this year for model development and implementation was of major importance and was given concentrated attention (see Chapter 5 as well as references there to other program-development evaluation documentation).

For studying student effects, the design involved comparisons among several groups of students:

Group A: FWS students returning from the previous year

Group B: FWS students entering in fall 1973 but not part of the randomly selected experimental group

Group C: The experimental group of FWS students selected randomly from a pool of applicants, entering in fall 1973

Group D: Control group students selected randomly from the same pool as Group C, but attending various Oakland high schools

Group E: A representative sample of Oakland Public School students

Much effort was made in conformance with NIE guidelines to construct and maintain the two groups designated experimental and control, selected randomly from the applicant pool. The design includes pre-, mid- and post-testing, between-group comparisons, and other traditional features.

There are a variety of limitations inherent in an evaluation study of this kind. Many are intrinsic to the nature of the program, others are due to the deficiencies in the current state of instrumentation. Some shortcomings may be inevitable in any internal evaluation effort, especially those related to biasing effects and value judgments; care needs to be exercised so that the merits of internal evaluation are not outweighed by potential faults. Flaws are clearly more likely to occur in outcome evaluation if it is done while a developing program is being stabilized. Other limitations result from legal, political, and social constraints imposed on a total program when it is being introduced in cooperation with an existing school system. Still other weaknesses result from the need to make priority choices when information is needed quickly for both program development and outcome evaluation of a total program.

In analyzing data, both descriptive and interential statistics were employed. Inferential use of statistics was restricted to comparisons between randomly selected groups from an operationally definable population. This meant that the samples on which such inferences were based had to be small, so that the unknown errors may be quite large.

Finally, a large proportion of the data presented here is based on student self-report and on rather globally stated questions or answers. Where possible, efforts have been made to "check" these responses against less subjective information. Nevertheless, much of the data may reflect halo effects, Hawthorne effects, rater bias, and so on. Within the limits of time and money, efforts have been made to develop, and provide information about, instruments less subject to these kinds of bases; but frequently the only way to get information was to ask those involved what they thought or how they felt. Insofar as possible, we have tried to allow for these biases.

In summary the following activities were carried out in the evaluation effort:

1. Instrument development. Because of the lack of available instrumentation for measuring EBCE program goals, considerable effort went into the development of instruments. Nearly all measuring devices were developed by the FWL-EBCE staff, or in collaboration with NIE and evaluators from the other three EBCE projects. Much effort was put into the scaling of items in certain instruments. Reliability estimates were made and

relations among items and among instruments were studied through multivariate analysis methods. Results of these efforts can be found in Chapter 3 and in the appendices.

2. Identification and recruitment of student groups for comparison.
3. Collection and analysis of data.
4. Field testing of instructional components.
5. Pariticpation at joint planning meetings with NIE and EBCE projects.
6. Initiation of a congruency analysis of objectives common to the four EBCE projects.
7. Completion of a cost comparison study looking toward replication (see Appendix B for report of the study).
8. Preparation of reports responsive to NIE requirements and special requests.
9. Furnishing data and materials requested by a team conducting the independent audit of evaluation procedures (see Appendix A for audit report).

ORGANIZATION OF THE REPORT

Chapter 2 of the report contains pertinent information about students. Recruitment and selection are covered, and subgroups within the FWS student body, control groups, and comparison groups are defined; included is a detailed description of each of the groups in terms of baseline data collected at the beginning of the school year.

In Chapter 3, Program Outcome Data, is contained the major evidence that has been collected, analyzed, and presented on program effects. Most of the tables prepared from interview data are referenced and placed in Appendix C. Much information on the instrumentation appears in the appendices; descriptive material, instrument copies, and a critical review of some instruments are in Appendix C. Concluding the chapter on outcome data is a summary of the major findings organized according to major goals of the program.

Chapter 4, Outcome Backup Research, contains four studies that are intended to provide what is felt to be needed augmentation and perspective to the limited range of information found in Chapter 3. Chapter 4 includes: (1) an anthropological study that focuses on day-to-day observed transactions, reactions, and communication patterns of students in the school and resource settings; (2) highlights of some interactions that appear to indicate interrelationships among program features; (3) test-taking attitudes from self-reports of students representing different comparison groups; and (4) a study to explore certain differences in educational philosophy among organizational components of the FWL-EBCE project.

Chapter 5, Model Development and Implementation, contains descriptive information and evaluative data on major model features and procedures observed over the year. The concentration is on procedures of diagnosis, orientation, and guidance; learning programs; student activity; learning packages; resource development and maintenance; and the interfaces of the model with the educational and economic sectors of the community.

A summary of the entire report appears as Chapter 6.

Chapter 2: Students

CHAPTER 2: STUDENTS

RECRUITMENT AND SELECTION OF STUDENTS

History

During the first three semesters of this program's evolution, four recruitment efforts were undertaken to attract students to Far West School. Several strategies were used during these campaigns: high school counselor referrals, student referrals, and media advertising. The campaigns were not aimed at recruiting a large number of students--the 23 students selected in the summer of 1973 are the largest number to be selected at one time. Table 2.1 provides recruitment data on FWS.

TABLE 2.1

SUMMARY OF PAST FWS RECRUITMENT

School Semester	Recruitment Method	No. of Applicants	No. of New Students*
Fall 1972	Presentation at Oakland high schools; high school counselor referrals	82	15
Spring 1973	Media campaign and student referrals	54	17
Fall 1973 - I	Media campaign and student referrals	75	23
Fall 1973 - II	Media campaign and student referrals	60	23
TOTAL HISTORY	Counselor and student referrals and media campaigns	271	78

* This represents students actually enrolled; the number selected is usually slightly higher.

Recruitment and Selection for Fall 1972

In September 1972, a recruitment program through the Oakland Public Schools produced 82 applicants; of these students, 15 were selected for fall 1972 admission. EBCE staff were especially concerned with having students who would be accepted by employers for on-site learning, fearing that initial failures could irreparably harm long-term chances of success. The applicants for fall 1972 enrollment therefore were screened in order to eliminate students with severe disabilities in communication skills, motivation, or initiative.

Students were selected through interviews and writing samples as having "adequate" skills in oral and written communications, as well as "adequate" motivation and initiative. Selection was based on the pooled judgments of two staff members who had worked directly with 12 "representative" students hired as hourly-wage employees during the summer of 1972. The summer "pre-pilot" project prepared resources and curriculum for the coming school year and exposed FWS staff to the kinds of problems they would face with full-time students in the fall.

Recruitment and Selection for Spring 1973

For the spring 1973 semester, additional students were recruited through the public media and personal referrals of enrolled students. From this effort, 54 students applied and 17 were selected for enrollment. Again, as in

TABLE 2.2

GRADE LEVEL AND SEX OF FWS STUDENTS,
SPRING SEMESTER 1973

Grade Level	Male	Female
10	1	1
11	10	7
12	8	3
Total	19	11

the fall, selection was made on the basis of interviews and writing samples. The 13 students continuing from the first semester brought the total enrollment to 30 for spring 1973. Early recruitment had favored mature students; only two sophomore students had been admitted. The majority of applicants to the program had been males, and such a majority continued to exist in the spring student body. Table 2.2 presents the distribution of students by grade level and sex.

Recruitment and Selection During Spring 1973

Recruitment for fall 1973 was conducted in two separate efforts. The recruitment of students started in March 1973. As in the previous fall, the staff wanted to balance the student population being enrolled for the next semester. Since a majority of the students expected to return were male, and since most of those would be seniors, an emphasis was placed on recruiting qualified younger students, especially females. Though the EBCE model was still in its early development phase, staff felt a need to screen prospective students to generate diversity and to avoid those who might overtax existing resources because of being failure-prone or likely to cause disruption. The campaign had dual foci: (1) referrals by current students, and (2) public communications and media. FWS students were encouraged to invite their friends to school information sessions. Radio and TV spots were placed and posters set up in public buildings. Most applications came from student referrals. This effort was truncated in May 1973, upon receipt of NIE guidelines for a more rigorous evaluation design for 1973-74. Seventy-five applications had been received during the two months' effort and 26 students had already been notified of selection before the curtailment. The criteria for selection of these 26 were two: (1) strong learning motivation, and (2) noticeable personal initiative (i.e., the ability to organize and direct one's activities). These two qualities were deemed essential for students in the individualized, experience-based program--especially during the current, formative phase.

Recruitment and Selection During Summer 1973

In its guidelines for evaluation design for the 1973-74 year, NIE established the requirement for an experimental group of new students with a matching control group, both randomly selected from program applicants. After study of these guidelines, Far West Laboratory developed a methodology for selection of students and control group members (see Internal Summative

Evaluation Plan FY74) and initiated a second recruitment effort for the fall. This campaign began in June 1973, and continued through August. The primary vehicle for this campaign was the public communications media, since regular school was not in session and student referrals had been taken in the spring. Unselected applicants remaining from the earlier campaign were recontacted and queried about their current interest, and in this manner 15 student referrals were brought back into the pool of prospective students. Sixty new applications were obtained during the summer.

Thirty-nine of the 60 applicants were judged eligible for the program after checking grade level, place of residence, and age. An applicant pool of 54 was formed by the combination of the 15 spring "standbys" with the 39 eligible applicants gathered during the summer. These applicants were contacted and asked to complete the Career Maturity Inventory and the Personal Orientation Inventory (total time: three hours). Care was taken to explain that these tests had an important role in the evaluation of EBCE but that they would not be used for any decisions in the selection process. Forty-one of the applicants completed these assessments and were designated as the group from which selection into experimental and control groups would be made.

The plan for random selection of experimental and control groups (Internal Summative Evaluation Plan FY74, p. 25) required 52 applicants for the stratified random process; this number was not attained. Though the summative evaluation plan called for stratification on three variables (high school, grade, and sex) before random selection, it was decided to stratify the sample on two variables only (high school and grade) because further stratification would have resulted in several empty cells in the schema and many cases of noncomparability between experimental and control groups.

Table 2.3 presents the stratification diagram and quotas obtained for each cell from data on the distribution of Oakland public high school students. It also presents the profile of the applicant pool when separated into the same cells. In Table 2.3 certain cells have an excess of applicants when compared with the OPS distribution; others have a deficiency of applicants. In other words, the group of applicants was not completely representative of ethnic groupings of the OPS. Contingencies for such occurrences had been developed in the actual random selection procedure, which produced experimental and control groups of 19 members each with the remaining three students designated as "excess." (One additional student was admitted for

TABLE 2.3

COMPARISON OF QUOTAS FOR EXPERIMENTAL AND CONTROL GROUPS WITH THE APPLICANT POOL

Grade	High Schools					
	More Than 60% Black Students		Less Than 60% Black Students		Total	
	Selection Quota	Number of Applicants	Selection Quota	Number of Applicants	Selection Quota	Number of Applicants
10	8	6	8	9	16	15
11	6	5	8	8	14	13
12	6	8	6	5	12	13
TOTAL	20	19	22	22	42	41

special reasons.) These three "excess" students were accepted into the program and tagged as potential replacements for the experimental group should any drop in enrollment occur.

The two recruitments resulted in the selection of 49 new students for the fall semester. Forty-six of these students enrolled, bringing the total enrollment in the fall to 61.

Attrition During the Fall 1973 Semester

Attrition during the fall semester reduced enrollment from 61 to 55. The six students who left FWS during the semester included three who left to return to regular school during the orientation period ending October 5, one who returned to his high school in mid-October, one who moved to another city in November, and one who decided to seek full-time employment and left school in January 1974. The three students who left during orientation expressed a preference for their regular school. The student who left a few days after orientation stated that the possibility that letter grades would not be awarded jeopardized his eligibility for continued financial aid through the Veterans' Administration; later information he furnished in January 1974 cited another reason for returning to his regular high school: "an incident with another student concerning drugs." The decisions to leave FWS made by the other two students were related to family problems.

Attrition During the Spring 1974 Semester

Three students graduated from Far West School at the conclusion of the fall semester. One previous student returned to FWS to complete her high-school diploma (she had passed the GED and attended a community college for one semester; she returned on advice from her college counselor). Thus, enrollment at the beginning of the spring semester was 53. Four students left Far West School during the spring. One of these was sent back to his previous high school early in the semester for continued lack of program activity. One student dropped during the first week to travel in Europe. One student suffered two serious automobile accidents during the spring and spent most of the semester in the hospital. One married girl transferred to the OPS Adult Education (evening) Program. At the conclusion of the spring semester, enrollment was 49.

Summary and Analysis of Past Recruitment and Selection

The past efforts at recruiting students into FWS provided information that, when analyzed, should guide the program toward more effective and efficient future recruitment. Two primary questions that should be answered are:

1. How effective has FWS been at enrolling a population representative of Oakland high school students?
2. What has been the relative cost-effectiveness of various advertising/recruiting strategies?

The first question can be perceived in another light: How effective has FWS been in attracting minority group students? Table 2.4 presents the distribution of entering students by ethnic group for each semester. According to the "Report on School, Region, and District Racial Ethnic Composition of Schools,"* the percentage composition of Oakland high schools is: Asian American--8%, Black--63%, Chicano--8%, White--22%.

It is apparent that FWS has not attracted a proportional number of black students. There are several reasons that can be offered for this discrepancy:

1. The program was relatively unknown in the Oakland black community until the summer of 1973.
2. The program had a temporal image, that is, a somewhat uncertain funding future that accentuated the risk accompanying entry into experimental programs.

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*Oakland Public Schools, October 1972.

TABLE 2.4

ETHNIC DISTRIBUTION OF NEW STUDENTS BY SEMESTER

School Semester	Asian		Black		Chicano		White		Total	
	N	%	N	%	N	%	N	%	N	%
Fall 1972	2	13	1	7	4	27	8	53	15	100
Spring 1973	0	0	6	35	4	24	7	41	17	100
Fall 1973 - I	0	0	7	30	3	13	13	57	23	100
Fall 1973 - II	0	0	11	48	3	13	9	39	23	100
Total History	2	3	25	32	14	18	37	47	78	100

3. McClymonds High School, a nearly all-black public high school in west Oakland, has a strong career-education program of its own (Career Cluster Program). Almost no students from that high school apply to FWS.

Acceptance of an experimental educational program by the middle-class black community is not immediate; it must be earned by the demonstration of value and stability over a period of time. There is a reluctance among middle-class black families to allow their children to enter an experimental program. Enrollment in such a program presents some attendant risk to the continuity of the students' education, and this risk is often viewed as unacceptable. To black members at lower economic levels, experimental programs are commonly viewed as ways to use their children as "research subjects."

The existence of the Career Cluster Program at McClymonds High School and other innovative programs within the OPS system makes it unlikely that FWS will obtain precisely the proportion of minority applicants representative of enrollment in OPS. Asian American representation is low, whereas Chicano enrollment in FWS has always been above the representative proportion. The total minority enrollment at FWS in February 1974 was 27 of 55.

It is clear that future recruitment must be designed to attract a proportional number of students among various ethnic groups.

To determine the effectiveness of differing recruitment strategies, the application forms for 196 students judged eligible* for FWS (whether enrolled or not) were processed to determine the sources of information about EBCE they listed. The question to be answered was: "Which of the recruitment procedures were reported by students to have caused them to apply?" Table 2.5 presents a summary of sources of information listed by students.

TABLE 2.5

STUDENT-REPORTED SOURCES OF INFORMATION LEADING TO AN APPLICATION FOR ENROLLMENT AT FWS

Year	No.	School*		Poster		Newspaper		Friend		Radio		TV	
		N	%	N	%	N	%	N	%	N	%	N	%
1972	71	20	28	6	8	9	13	31	44	5	7	0	0
1973	125	20	16	22	18	5	4	41	33	25	20	12	9
Both	196	40	20	28	14	14	7	72	38	30	15	12	6

*School counselors were mentioned by five students in 1972 and by two in 1973.

Table 2.5 shows that word-of-mouth is very much the chief means of recruitment reported. If it is true that the "School" source is by word-of-mouth, as well, the overwhelming percentage of students (58%) heard about FWS in this manner. None of the 1972 respondents reported both "School" and "Friend" as sources, and only three did so in 1973, indicating that we may be counting the same students twice in only 2% of the 196 cases. (The assumption behind this count of responses was that if the "Friend" told him about FWS while at school, the applicant might report both as sources.) As the major 1973 recruitment activities utilizing media took place while schools were closed for summer, analysis of the frequency and coverage provided by newspaper, radio, and TV will determine which was most productive. The number and location of posters, and the number of radio announcements, TV showings, and newspaper articles are described in Table 2.6

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*A total of 271 applications had been received, but only 196 met administrative criteria for eligibility.

TABLE 2.6

1973 RECRUITMENT ACTIVITIES

	Posters	Radio Spots	TV Spots	Newspaper
Number/Frequency	200 posters in buses and small stores	3 stations; 10 announcements daily	1 station; 1 or 2 daily	1 feature article in Teens section
Time Period	August	May-June July-August	June-August	July

Table 2.7 shows the effect of having a student body to help "sell" the school. The increase in people's knowledge of FWS may also reflect the effect of media and poster use.

TABLE 2.7

CATEGORIES OF "FRIENDS" REPORTED ON APPLICATIONS FOR ENROLLMENT IN 1972 AND 1973

Friend Specified as:	1972		1973		Both	
	N	%	N	%	N	%
1. Student, former student, or other FWS applicant	15	48	24	58	39	55
2. Relatives: grandmother, mother, sister, brother, uncle	4	13	4	10	8	11
3. Name of person not known to FWS	1	3	5	12	6	8
4. Not specified	11	36	8	20	19	26

To summarize, the majority of prospective students reported that they heard about FWS from friends. Radio announcements were the prime emphasis of the 1973 recruitment, running daily on three stations for four months; they proved only somewhat fruitful (25 eligibles). The poster campaign was implemented in August and provided many late applicants (22 eligibles). The television filler spots and newspaper feature article showed poor results (12 and 15 eligibles respectively).

The total cost figures for the recruitment campaign are revealing:

Method	Cost
Posters	$785
Radio Spots	$3914
Television	Free
Newspaper	Free
Friends	Free

When one compares the cost figures of each method with the eligible students each method generated, the following cost figures result:

Source	Cost Per Eligible Applicant
Television, newspaper, friends	0
Posters	$36
Radio	$157

It is clear that the radio campaign was the least cost-effective. The television spots were free. The initial newspaper article was free, but may not be repeatable. The poster campaign last year was costly but drew many applicants, considering the relatively short period of use. The cost would be similar for an extended period.

Study of the past figures indicated that the potential number of eligible applicants reachable through these media is too small to provide an adequate number of students for next year. The recruitment campaign for 1974-75 was undertaken in the spring--before summer recess--and direct contact with Oakland high schools was accomplished. That effort is considered a portion of the 1974-75 EBCE activity and thus will be described in the evaluation report for next year.

CURRENT FWS STUDENTS

For the study of treatment outcomes, the students at FWS can be separated into distinct groups according to their time of entry and method of selection:

- Group A--returning students from 1972-73
- Group B--students entering in fall 1973, selected in spring 1973
- Group C--students entering in fall 1973, selected in summer 1973
- Group O--students entering in fall 1973, representing unusual administrative cases.

These student groups exist for the purpose of analysis only; no such real classification was made, and the treatment applied was not dependent on these groupings. Nevertheless, each student group labeled A, B, and C represents a disjoint set of students with common characteristics (descriptors) defined by their entry. So it is possible to hypothesize differing program outcomes among these sets. The situation, or set of parameters, describing the entry of each group is presented below. Later in this chapter the student groups are compared with each other and with the total FWS population (often called Group W for the "whole") and with pertinent groups of Oakland high school students on several important demographic variables.

Returning Students: Group A

All students enrolled in the 1972-73 pilot EBCE program at FWS were encouraged to re-enroll in fall 1973. Fifteen of 20 nongraduates did enroll in September.* Within the first two weeks of school, one of them withdrew, leaving 14 continuing students from the previous year. Three of these students graduated at midyear. This group provided to the arriving newcomers the essential school element of "upperclassmen" or "veterans." Since they previously had at least one full semester of familiarity with the concept of experience-based career education, this group currently represents the outcome of three or more semesters of EBCE.*

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*Questionnaires to identify the reasons for not continuing were sent to the five students who did not enroll, but none were returned.

New Students Selected During Spring 1973: Group B

Recruitment for fall 1973 began during March and ended in May 1973, on receipt of NIE guidelines requiring the establishment of experimental and control groups for the 1973-74 year. The two months' effort resulted in selection of 26 applicants for the fall program. On the basis of an application form and a personal interview, each of these students was judged "especially well suited" for the EBCE program.

In selection, the staff attempted to balance the student population by choosing more females and younger students to offset the anticipated composition of the returning students (mostly male seniors). Of the 26 students chosen, 23 enrolled at FWS in September 1973. Three students withdrew during the fall semester. The remaining 20, comprising Group B, represent an effort at choosing students who might benefit most from EBCE.

New Students Selected During Summer 1973: Group C

Upon receipt of NIE guidelines establishing the 1973 experimental design, the spring recruitment campaign was temporarily postponed. Applicants were notified that a decision on their status would be made in the summer. A new recruitment effort, implemented in June, continued throughout the summer. Applicants (both those remaining from spring and those applying during summer) were placed in a selection pool, stratified on high school of previous attendance and on grade level; they were then randomly selected into equivalent experimental and control groups. Each group chosen contained 19 members. During the fall semester two students withdrew. Three additional students withdrew during the spring, leaving 14 members at the close of the year. Group C represents a cross-section of program applicants for fall 1973; often described in this report as the experimental group, it has a corresponding control group (Group D, described below).

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*In fact, nine of these 14 had two semesters of EBCE by fall 1972; five had only one. However, since the model was still in early development during its fall 1972 semester, and largely took its current form during spring 1973, it was decided not to distinguish further among these students.

Other New Students: Group O

Four students entering FWS in the fall of 1973 do not fall into any of the classes above. They represent unique cases faced by FWS during recruitment and selection. One of these students returned to his original high school during the spring. Students assigned to Group O are reported in analyses of the entire group of FWS students but not in any of the special analyses of Groups A, B, or C.

OAKLAND PUBLIC HIGH SCHOOL STUDENTS SERVING IN CONTROL AND COMPARISON GROUPS

Two different groups of Oakland high school students are cooperating with FWL-EBCE in the evaluation. One of the two groups serves as a control group for FWS Group C (random-experimental). The other group serves as a comparison group for the total FWS population. The two groups are:

Group D--applicants to FWS from Oakland public high schools eligible for FWS but randomly selected for the Control Group for FWS Experimental Group (OPS Control Group)

Group E--students (nonapplicants) in Oakland public high schools randomly selected and representative of the total high school population (OPS Comparison Group).

Groups D and E, as expected, have fewer cooperating members than were originally selected. One of the questions addressed in the following discussion of Groups D and E is: "How representative of the respective randomly selected samples are the reduced samples of cooperating students?"

FWS Applicants Selected Randomly for a Control Group: Group D

Nineteen applicants were selected for the Control Group D. Maintaining the cooperation of this group--in an effort consisting mainly of answering questionnaires and completing tests--was indeed a problem. Members of Group D were notified of their status by telephone and special attention was given to their retention. All were asked to come to a special presentation describing EBCE, the experimental nature of the school, and the need for control-group members. The students were informed of their anticipated contributions, including several sessions throughout the year of one or two hours each, for which they would receive honoraria. They were promised a counseling/interpretation session after the end of the school year in which their assessment profiles would be presented and interpreted. A further possibility suggested was that they would be awarded priority status as applicants for subsequent FWS admission. Fourteen of the 19 students cooperated in each of the first two summative testing sessions: October 1973 and January 1974. Twelve of the students participated in the year-end (May 1974) testing session. Table 2.8 presents a comparison of the Group D sample as originally selected and the subsets of Group D who have participated in the summative testing sessions.

TABLE 2.8

COMPARISON OF THE ORIGINAL AND
PARTICIPATING COMPOSITIONS OF THE CONTROL GROUP

History	Grade Level			Previous H.S.*		Ethnic Group			Sex	
	10	11	12	I	II	White	Black	Other	M	F
Original Size	7	6	6	8	11	8	9	2	6	13
First Session	3	6	5	5	9	6	6	2	6	8
Second Session	3	6	5	5	9	6	6	2	6	8
Third Session	3	5	4	4	8	5	6	1	5	7

* I = more than 60% non-white students; II = fewer than 60% non-white.

As is shown by the table, all but one who dropped from the Control Group were women; four of seven were sophomores. The Chi-square test applied to the groups of year-end participants and nonparticipants shows no significant differences at the .05 level, but this test is of doubtful accuracy with such small frequencies. The extent to which generalizations can be made from comparisons between Group C and D is quite uncertain.

Randomly Selected Sample of Oakland Public High School Students: Group E

In November 1973, FWL-EBCE selected a stratified random sample of 120 students from the rosters of the Oakland public high schools. Approximately 20% of the students selected from fall registration records were no longer enrolled in November and addresses could be located for only 96 members of the sample. These students were contacted by mail and asked to serve as a group of comparison students for the EBCE sample. They were offered a small remuneration for each of several testing sessions proposed for the interim and post data-collection efforts. Thirty-one students appeared for the interim data-collection session, held on Saturday, January 26, 1974. Twenty-four students attended the post data-collection sessions on May 18, 1974. Demographic data have been collected on both the participating and nonparticipating members of Group E.* These are presented in Table 2.9 along with

TABLE 2.9

COMPARISON OF ORIGINAL AND
PARTICIPATING COMPOSITIONS OF THE OPS COMPARISON GROUP

Variable	Category	Midyear			End of Year		
		Show	No-Show	Chi-Square Test (p=.05)	Show	No-Show	Chi-Square Test (p=.05)
Sex	Male	16	44	Not Significant	11	49	Not Significant
	Female	15	38		11	42	
High School	Castlemont	8	17	Not Significant	7	18	Not Significant
	Fremont	5	13		3	15	
	Oakland High	5	18		2	21	
	Oakland Tech	4	10		2	12	
	Skyline	7	16		7	16	
	McClymonds	2	8		1	9	
Grade Level	10	10	35	Not Significant	8	37	Significant
	11	15	19		12	22	
	12	6	28		2	32	

*Data could be located on only 82 of 89 nonparticipants the results of the Chi-square test for significance of difference between the two subgroups. Grade-point averages were also compared for the two sets of students. These comparisons revealed the following:

- Mean grade-point average of the midyear participating members of Group E was 2.12.*
- Mean grade-point average of midyear no-shows of Group E was 2.31.
- The difference was not significant at the .10 level.

On the basis of these results, the participating members of the stratified, randomly selected sample of OPS students are used as representative of Oakland high school students in the remainder of this report. Qualifications will be made to recognize the biased attrition rate with respect to grade level in the OPS Comparison Group.

COMPARISONS OF STUDENT GROUPS ON DEMOGRAPHIC VARIABLES

Given the rationale for and the description of the various subgroups of EBCE students within FWS and the control/comparison groups within OPS, several intergroup comparisons are essential to the evaluation of treatment (EBCE) outcomes. In order to infer the cause of any differing outcomes among these groups, the groups first must be analyzed for sample similarities and differences.

Comparisons of different FWS groups on demographic baseline data will build the foundation for later interpretation of any differing outcomes found among these groups. Comparisons of student groups within FWS with corresponding groups within OPS on baseline variables will reveal the degrees of similarity and difference between these groups, and thus will define the limits to which statistical inference can be used in evaluating the effect of the EBCE program on high school students. Table 2.10 presents the baseline demographic data collected at midyear on the FWS and OPS student groups. Table 2.11 presents the group means and standard deviations for age, grade level, and grade-point average.

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*A=4, B=3, C=2, D=1, F=0.

TABLE 2.10

BASELINE (2/74) DATA ON STUDENT DEMOGRAPHIC VARIABLES BY GROUP*

		Far West School								Oakland High Schools			
		W=55		A=14		B=20		C=17		D=14		E=31	
Variable	Values	N	%	N	%	N	%	N	%	N	%	N	%
High School	High-Minority	21	38	5	36	4	20	8	47	5	36	15	48
	Low-Minority	34	62	9	64	16	80	9	53	9	64	16	52
Current Grade Level	10	15	27	0	0	9	45	6	35	3	21	10	32
	11	14	26	2	14	5	25	7	41	6	43	15	48
	12	26	47	12	86	6	30	4	24	5	36	6	19
Sex	Male	26	47	9	64	6	30	8	47	6	43	16	52
	Female	29	53	5	36	14	70	9	53	8	57	15	48
Ethnic Group	Black	15	27	1	7	5	25	7	41	6	43	20	65
	Chicano	9	16	4	29	2	10	1	6	1	7	0	0
	White	29	53	7	50	13	65	9	53	6	43	10	32
	Other	2	4	2	14	0	0	0	0	1	7	1	3
	No Answer	-	-	-	-	-	-	-	-	-	-	-	-
Age (9/73)	15 or Under	4	7	0	0	3	15	1	6	3	21	2	7
	15+ to 15½	5	9	0	0	2	10	3	18	0	0	7	23
	15½+ to 16	8	15	1	7	5	25	2	12	1	7	1	3
	16+ to 16½	7	13	1	7	4	20	2	12	4	29	7	23
	16½+ to 17	7	13	3	21	0	0	3	18	2	14	4	13
	17+ to 17½	16	29	6	43	5	25	3	18	3	21	6	19
	17½+ to 18	8	15	3	21	1	5	3	18	1	7	4	13
	Over 18	0	0	0	0	0	0	0	0	0	0	0	0
Regular School Curriculum	Academic	22	40	8	57	6	30	7	41	6	43	-	-
	General	28	51	5	36	12	60	9	53	7	50	-	-
	Vocational	4	7	1	7	2	10	0	0	1	7	-	-
	Other	1	2	0	0	0	0	1	6	0	0	-	-

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*As noted in the text, there was further attrition in these groups for final testing.

TABLE 2.10

BASELINE (2/74) DATA ON STUDENT DEMOGRAPHIC VARIABLES BY GROUP*
(Continued)

		Far West School								Oakland High Schools			
		W=55		A=14		B=20		C=17		D=14		E=31	
Variable	Value	N	%	N	%	N	%	N	%	N	%	N	%
Father's Educational Level	None	1	2	0	0	0	0	1	6	0	0	2	7
	Elementary	0	0	0	0	0	0	0	0	1	7	3	10
	Some High School	4	7	1	7	0	0	2	12	2	14	6	19
	High School Graduate	15	27	2	14	8	40	5	29	3	21	12	39
	Some Post-High School	14	26	4	29	3	15	5	29	2	14	3	10
	College Graduate	7	13	4	29	2	10	0	0	4	29	3	10
	Some Graduate Study	3	6	0	0	1	5	2	12	0	0	1	3
	Advanced Degree	4	7	1	7	2	10	1	6	0	0	1	3
	No Answer	7	13	2	14	4	20	1	6	2	14	0	0
Long-Range Plans	01 Unspecified Job	14	26	2	14	7	35	4	24	3	21	10	32
	02 Business-Clerical	2	4	0	0	1	5	1	6	0	0	0	0
	03 Business-Sales	0	0	0	0	0	0	0	0	0	0	0	0
	04 Business-Management	2	4	1	7	1	5	0	0	1	7	0	0
	05 Crafts & Operative	5	9	3	21	0	0	2	12	0	0	0	0
	06 Technical	3	6	1	7	1	5	1	6	1	7	2	7
	07 Services & Protection	2	4	1	7	0	0	0	0	2	14	2	7
	08 Professional	6	11	1	7	2	10	3	18	0	0	6	19
	09 Military	0	0	0	0	0	0	0	0	1	7	2	7
	10 Housewife	0	0	0	0	0	0	0	0	0	0	1	3
	11 Farmer	0	0	0	0	0	0	0	0	0	0	0	0
	12 Retired	1	2	0	0	0	0	0	0	0	0	0	0
	21 Higher Education (unspecified)	5	9	2	14	0	0	3	18	2	14	8	26
	22 MA or PhD Degree	1	2	1	7	0	0	0	0	1	7	0	0
	30 Can't Say	14	26	2	14	8	40	3	18	3	21	0	0

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*As noted in the text, there was further attrition in these groups for final testing.

TABLE 2.10

BASELINE (2/74) DATA ON STUDENT DEMOGRAPHIC VARIABLES BY GROUP*
(Continued)

		Far West School								Oakland High Schools			
		W=55		A=14		B=20		C=17		D=14		E=31	
Variable	Value	N	%	N	%	N	%	N	%	N	%	N	%
Previous Grade-Point Average	3.50 - 4.00 (A)	3	5	1	7	2	10	0	0	0	0	2	6
	2.50 - 3.49 (B)	19	35	8	57	6	30	4	24	3	21	10	32
	1.50 - 2.49 (C)	24	44	4	29	8	40	10	59	6	43	15	48
	0.50 - 1.49 (D)	7	13	1	7	3	15	2	12	0	0	3	10
	0.00 - 0.49 (F)	1	2	0	0	1	5	0	0	1	7	0	0
	Not Available	1	2	0	0	0	0	1	6	4	29	1	3
Mother's Educational Level	None	1	2	0	0	1	5	0	0	0	0	1	3
	Elementary	0	0	0	0	0	0	0	0	2	14	1	3
	Some High School	7	13	1	7	3	15	2	12	3	21	6	19
	High School Graduate	16	29	3	21	4	20	8	47	4	29	10	32
	Some Post-High School	16	29	3	21	5	25	6	35	3	21	3	10
	College Graduate	10	18	5	36	4	20	1	6	1	7	5	16
	Some Graduate Study	5	9	2	14	3	15	0	0	1	7	4	13
	Advanced Degree	0	0	0	0	0	0	0	0	0	0	1	3
	No Answer	0	0	0	0	0	0	0	0	0	0	0	0
Summary of Reasons for Applying to FWS** (9/73 post-entry)	Better, Nice, Get Education	20	36	5	36	8	40	7	41	-	-	-	-
	Different, Change, Meets Personal Needs	40	73	9	64	14	70	16	94	-	-	-	-
	Dislike Previous School	33	60	10	72	13	65	6	35	-	-	-	-
	Career Exploration	21	38	7	50	8	40	5	29	-	-	-	-
	Job Training, Get Ready for Work	9	16	1	7	4	20	3	18	-	-	-	-
	No Answer	1	2	2	14	0	0	0	0	-	-	-	-

*As noted in the text, there was further attrition in these groups for final testing.

**Summary of Reasons for Applying to FWS includes first, second, and third reasons, if students gave them. Primary Reason, shown on the next page, includes only the first reason given.

TABLE 2.10

BASELINE (2/74) DATA ON STUDENT DEMOGRAPHIC VARIABLES BY GROUP*
(Continued)

		Far West School								Oakland High Schools			
		W=55		A=14		B=20		C=17		D=14		E=31	
Variable	Values	N	%	N	%	N	%	N	%	N	%	N	%
Primary Reason for Applying to FWS (9/73 post-entry)	Better, Nice, Get Education	12	22	3	21	4	20	5	29	-	-	-	-
	Different, Change, Meets Personal Needs	19	35	4	29	5	25	9	53	-	-	-	-
	Dislike Previous School	13	24	5	36	6	30	1	6	-	-	-	-
	Career Exploration	6	11	2	14	2	10	2	12	-	-	-	-
	Job Training, Get Ready for Work	4	7	0	0	3	15	0	0	-	-	-	-
	No Answer	1	2	0	0	0	0	0	0	-	-	-	-

TABLE 2.11

MEANS AND STANDARD DEVIATIONS FOR AGE, GRADE LEVEL, AND GPA FOR STUDENT GROUPS (9/73)

Group	Age (months)			Grade Level			GPA (A=4.0)		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
W	198.4	10.69	55	11.32	0.79	55	2.22	0.82	54
A	204.5	6.84	14	11.86	0.35	14	2.50	0.81	14
OBC	196.3	10.96	41	10.98	0.84	41	2.12	0.81	40
B	193.4	10.43	20	10.85	0.85	20	2.21	0.94	20
C	197.2	11.14	17	10.88	0.76	17	2.09	0.65	16
D	195.9	11.30	14	11.14	0.74	14	2.16	0.92	10
E	196.0	11.20	31	10.87	0.71	31	2.31	0.80	30

*As noted in the text, there was further attrition in these groups for final testing.

Intergroup Comparison Within Far West School

Comparison of Returning Students (Group A) with Later Recruits (Group OBC)

Returning students (Group A) are the products of a different recruitment program from the one used during 1973, so Group A is quite likely to be dissimilar in composition from the remainder of FWS. These differences may also effect treatment outcomes. Furthermore, by definition Group A (returnees) precludes sophomores as members.

The Chi-square test indicates differences significant (to at least the .10 level) between Group A and Group OBC (newcomers to the program) on four variables: grade level, age, ethnic group, and previous grade-point average. The difference between the two groups on grade level is explained above. Group A also has a higher mean and smaller standard deviation for students' age; this, too, is directly attributable to the absence from this group of sophomores who are approximately one year younger.

Group A (returnees) shows a marked difference in ethnic composition from the remainder of FWS. It has only one black student among its 14 members (7%) compared to 14 black students among the 41 members of Group OBC (34%). This fact was previously noted and discussed. FWS continues to disseminate information to the black community on the value and objectives of EBCE.

The higher mean of Group A (returnees) on grade-point average before EBCE entry is consistent with the complex recruitment history for that group. The earliest students at FWS entered in September 1972 included several problem referrals from high school counselors. When the number of students was increased in spring 1973, screening of applicants eliminated very low achievers. Program attrition through both dropout and graduation has reduced these students from the original 30 to 14, but the dropout rate has been higher among the problem students. The group of continuing students (Group A) now scores above the school mean on most measures of achievement we have administered, e.g., see Table 2.11 for GPA.

Comparison of Spring Selection (Group B) with Summer Selection (Group C)

There are no statistically significant differences between these two groups of new students across demographic variables (Table 2.10). However, note that 80% of Group B students who were selected on criteria came from high schools with low-minority enrollment, whereas for Group C, the minority proportion of previous high school was used as a stratification variable (assigned a ratio of 11:9, the applicant proportion). As a result, only 25% of Group B are black, whereas 41% of Group C (random FWS) are black. However, the black representation of Group C is still well below the documented 62% black enrollment of all Oakland high schools.* The variation in high school representation and related ethnic distributions among groups to a large extent results from differences in recruitment procedures. These procedures were examined earlier in this section when discussing the evaluation of EBCE recruitment.

Far West School Students by Grade Level

Differing treatment outcomes can be hypothesized for EBCE students according to their grade level. Seniors may well have sufficiently greater maturity that they are more at ease in relationships with RPs and thus effect greater learning outcomes from EBCE. Midyear baseline data on FWS students aggregated by grade level are presented in Table 2.12.

Far West School Students by Sex

An important question to be answered in the evaluation of EBCE is whether or not the experience-based program of career education provides equal learning opportunities for both young men and young women. This question is complex, its answer requires continual monitoring of student-resource interaction, types of learning experiences offered at sites, and willingness of RPs to work with the sexes. Consequently, careful analysis is necessary to detect any differences in outcomes between the sex groups. Demographic data comparing FWS males and females are shown in Table 2.12.

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*Representative Group E has 65% black membership.

TABLE 2.12

BASELINE (2/74) DATA ON FWS STUDENTS BY GRADE LEVEL AND SEX

				Grade Level						Sex			
		Group W		10		11		12		Male		Female	
		N=55		N=15		N=14		N=26		N=26		N=29	
Variable	Value	N	%	N	%	N	%	N	%	N	%	N	%
High School	High-Minority	21	38	4	27	5	36	12	46	11	42	10	34
	Low-Minority	34	62	11	73	9	64	14	54	15	58	19	66
Current Grade Level	10	15	27	15	100	0	0	0	0	6	23	9	31
	11	14	26	0	0	14	100	0	0	6	23	8	28
	12	26	47	0	0	0	0	26	100	14	54	12	41
Sex	Male	26	47	6	40	6	43	14	54	26	100	0	0
	Female	29	53	9	60	8	57	12	46	0	0	29	100
Ethnic Group	Black	15	27	5	33	2	14	8	31	8	31	7	24
	Chicano	9	16	0	0	2	14	7	27	5	19	4	14
	White	29	53	10	67	9	64	10	39	11	42	18	62
	Other	2	4	0	0	1	7	1	4	2	8	0	0
	No Answer	0	0	0	0	0	0	0	0	0	0	0	0
Age (9/73)	15 or Under	4	7	4	27	0	0	0	0	0	0	4	14
	15+ to 15½	5	9	5	33	0	0	0	0	2	8	3	10
	15½+ to 16	8	15	5	33	2	14	1	4	3	12	5	17
	16+ to 16½	7	13	1	7	6	43	0	0	4	15	3	10
	16½+ to 17	7	13	0	0	4	29	3	12	4	15	3	10
	17+ to 17½	16	29	0	0	1	7	15	58	7	27	9	31
	17½+ to 18	8	15	0	0	1	7	7	27	6	23	2	7
	Over 18	0	0	0	0	0	0	0	0	0	0	0	0
Regular School Curriculum	Academic	22	40	3	20	5	36	14	54	15	58	7	24
	General	28	51	10	67	9	64	9	35	9	35	19	66
	Vocational	4	7	2	13	0	0	2	8	2	8	2	7
	Other	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 2.12

BASELINE (2/74) DATA ON FWS STUDENTS BY GRADE LEVEL AND SEX (Continued)

				Grade Level						Sex			
		Group W		10		11		12		Male		Female	
		N=55		N=15		N=14		N=26		N=26		N=29	
Variable	Value	N	%	N	%	N	%	N	%	N	%	N	%
Mother's Educational Level	None	1	2	0	0	1	7	0	0	0	0	1	3
	Elementary	0	0	0	0	0	0	0	0	0	0	0	0
	Some High School	7	13	1	7	3	21	3	12	4	15	3	10
	High School Graduate	16	29	6	40	5	36	5	19	10	39	6	21
	Some Post-High School	16	29	3	20	2	14	11	42	8	31	8	28
	College Graduate	10	18	4	27	1	7	5	19	3	12	7	24
	Some Graduate Study	5	9	1	7	2	14	2	8	1	4	4	14
	Advanced Degree	0	0	0	0	0	0	0	0	0	0	0	0
	No Answer	0	0	0	0	0	0	0	0	0	0	0	0
Father's Educational Level	None	1	2	1	7	0	0	0	0	0	0	1	3
	Elementary	0	0	0	0	0	0	0	0	0	0	0	0
	Some High School	4	7	0	0	2	14	2	8	3	12	1	3
	High School Graduate	15	27	5	33	5	36	5	10	7	27	8	28
	Some Post-High School	14	26	3	20	2	14	9	35	8	31	6	21
	College Graduate	7	13	2	13	0	0	5	19	3	12	4	14
	Some Graduate Study	3	6	0	0	3	21	0	0	2	8	1	3
	Advanced Degree	4	7	1	7	1	7	2	8	1	4	3	10
	No Answer	5	9	2	13	0	0	3	12	1	4	4	14
Previous Grade-Point Average	3.50 - 4.00 (A)	3	5	1	7	1	7	1	4	1	4	2	7
	2.50 - 3.49 (B)	19	35	5	33	3	21	11	42	7	27	12	41
	1.50 - 2.49 (C)	24	44	8	53	7	50	9	35	13	50	11	38
	0.50 - 1.49 (D)	7	13	1	7	2	14	4	15	5	19	2	7
	0.00 - 0.49 (F)	1	2	0	0	0	0	1	4	0	0	1	3
	Not Available	1	2	0	0	1	7	0	0	0	0	1	3

TABLE 2.12

BASELINE (2/74) DATA ON FWS STUDENTS BY GRADE LEVEL AND SEX (Continued)

				Grade Level						Sex			
		Group W		10		11		12		Male		Female	
		N=55		N=15		N=14		N=26		N=26		N=29	
Variable	Value	N	%	N	%	N	%	N	%	N	%	N	%
Primary Reason for Applying to FWS* (9/73 post-entry)	Better, Nice, Get Education	12	22	5	33	3	21	4	15	7	27	5	17
	Different, Change, Meets Personal Need	19	35	4	27	6	43	9	35	8	31	11	38
	Dislike Previous School	13	24	4	27	2	14	7	27	4	15	9	31
	Career Exploration	6	11	1	7	2	14	3	12	3	12	3	10
	Job Training; Get Ready for Work	4	7	1	7	1	7	2	8	3	12	1	3
	No Answer	1	2	0	0	0	0	1	4	1	4	0	0
Summary of Reasons for Applying to FWS* (9/73 post-entry)	Better, Nice, Get Education	20	36	9	60	4	29	7	27	10	39	10	35
	Different, Change, Meets Personal Need	40	73	9	60	14	100	17	65	14	54	26	90
	Dislike Previous School	33	60	7	47	8	57	18	69	13	50	20	69
	Career Exploration	21	38	3	20	4	29	14	54	10	39	11	38
	Job Training; Get Ready for Work	9	16	4	27	3	21	2	8	7	27	2	7
	No Answer	1	2	0	0	0	0	1	4	1	4	0	0

* Primary Reason for Applying to FWS includes only the first reason given by students. Summary of Reasons for Applying to FWS includes first, second, and third reasons, if students gave them.

Comparisons of Groups Between FWS and OPS

Comparison of Whole FWS Population (Group W) with Random OPS Population (Group E)

In that Group E is representative of the OPS high school population, it would be valuable to compare changes in this group over the year to changes measured in the FWS students (Group W). However, the degree to which such comparisons are meaningful is limited by the level of similarity of the two groups. The demographic data collected on Group E and Group W were shown in Table 2.10.

Chi-square tests on these variables yield differences significant at the .10 level on three variables: ethnic affiliation, grade level, and long-term planning. The ethnic composition of the two groups are markedly different. The figures on Table 2.13 contrast the percentage compositions of the two groups with documented 1972 composition of the Oakland senior high schools. Several conclusions are apparent from this presentation:

- Groups W (FWS) and E (Random OPS) are of markedly different ethnic composition;
- Group E represents the black population of OPS accurately, but somewhat under-represents other minorities;*

TABLE 2.13

Ethnic Composition Comparison

Ethnic Background	Group W	Group E	Oakland Public School
Black	27%	65%	63%
White	53%	32%	22%
Chicano	16%	0%	8%
Other	4%	3%	8%

---

*Statistical Chi-square test of Group E and reported OPS ethnic breakdown figures show Group E to be a representative sample of all OPS.

- Group W over-represents white and Chicano and under-represents black students. As a whole, Group W under-represents other non-white groups.

From these facts, it is clear that any comparison of outcomes between Group W and Group E must contain a careful consideration of all implications of the groups' differing ethnic balances.

Comparison of Random FWS (Group C) with Random Control (Group D)

Groups C and D form the basis of the design for the evaluation of 1973-74 program outcome, being randomly selected treatment and control groups respectively. The small sample sizes of these two groups reduce the scope of information that can be developed through comparisons, and make more difficult the task of statistical inference. Nevertheless, they may provide some approximation to a rigorous analysis of year-end program outcomes.

The two groups are products of stratified random sampling from a common pool. The variables used in the stratification were grade level and size of minority population at previous high school. Table 2.10, columns 9-12, presents data for the composition of Group C and Group D across demographic variables. Table 2.11 shows the means and standard deviations for age, grade level, and GPA. A Chi-square test applied to each variable shows no significant difference between groups.

During the process of student selection in August 1973, each prospective student was asked to give his main reason for applying to FWS, and also to list any other reasons he had for applying. These data are separate from the similar demographic data collected across the FWS in September 1973, shown in Table 2.10. The comparison of Group C and Group D on this question is shown in Table 2.14. Also shown are the September responses to the question by members of Group C after selection into the program. In August the two groups agreed quite closely both on their primary reasons for applying to the program and on a summary of all reasons for applying to the program. After selection into the program, members of Group C gave somewhat different reasons for applying: need for a "better program" or for a "change" markedly increased; desire for "career exploration" decreased. The most obvious hypothesis is that the earlier responses were sometimes affected by students' desire to be selected into the program, i.e., occasional efforts to give an answer sought by EBCE staff. Later, after selection, some students responded more candidly.

TABLE 2.14

REASONS FOR APPLYING TO FWS: AUGUST 1973, PRE-ENTRY AND SEPTEMBER 1973, POST-ENTRY

		8/73				9/73	
		Group C		Group D		Group C	
Reason	Importance*	N	%	N	%	N	%
Better; nice; get education	Primary	2	13	2	15	5	29
	Summary	3	19	3	23	7	41
Difference; change; meets personal needs	Primary	8	50	6	46	9	53
	Summary	11	69	8	62	16	94
Dislike previous school	Primary	1	6	0	0	1	6
	Summary	1	6	1	8	6	35
Career exploration	Primary	5	31	4	31	2	12
	Summary	7	44	6	46	5	29
Job training; get ready for work	Primary	0	0	1	8	0	0
	Summary	1	6	2	15	3	18
TOTAL	Primary	16	100	13	100	17	100
	Summary	23	144	20	153	37	218

* See note on Table 2.10 for definitions of Primary and Summary.

All evidence suggests that the two groups were quite comparable on the demographic variables at the time of selection. Since that time, each group has undergone some attrition. Statistical analysis by Chi-square test reveals no significant differences between the sets of cooperating members of these two groups.

Summary of Group Comparisons

The following statements summarize the comparison of student samples in the fall semester across demographic variables:

1. The group of FWS students returning from 1972-73 is quite different in composition from the entering FWS groups.
2. The groups of students first entering FWS in fall 1973 are very similar in composition.
3. The experimental group and control group are very similar in composition.
4. The randomly selected group from OPS appears to be representative of the OPS high school population.
5. The group selected randomly to represent OPS is different in composition from the control group and from each of the groups of FWS students.

Chapter 3: Program Outcome Data

CHAPTER 3: PROGRAM OUTCOME DATA

INTRODUCTION

Student programs at Far West School (FWS) are highly individualized. The structuring of educational experiences is unconventional. These two facts make precise assessment of the program's outcomes difficult. In the absence of any single technique capable of measuring an educational treatment like FWS, evaluators have relied on an eclectic approach with a variety of instruments, methods, and data sources.

In this section program outcome data are divided into two categories: perceptions of the FWS program held by students, parents, and resources; and progress of students in EBCE goal-related areas. In presenting the perceptions of students, parents, and resources, information is organized by instrument used for collection. In the crucial area of student outcomes, data are organized according to four primary areas of program concern: self-development, interpersonal skills, basic skills, and career awareness and planning. Within these areas a number of questions relevant to the effectiveness of the program are asked with answers coming from a variety of instruments and data sources. The sources of data used to answer a question are indicated directly following the question.

Instruments and Procedures for Collection of Data

Fourteen instruments (questionnaires, rating scales, interview schedules, and performance tests) are listed in the data collection schedule. (See Table 3.1). FWL-EBCE staff either developed by itself or in cooperation with NIE and staff at the other EBCE sites all of the instruments used except the standardized Iowa Tests of Educational Development. The Career Maturity Inventory and the Personal Orientation Inventory were not used in the final collection period. Detailed information about the development and assessment of instruments is presented in Appendix C, along with a description of the data collection procedures.

A number of reliability and validity studies were undertaken in relation to certain of the measures. Scales were developed for items of the Job Related Attitudes; interrater reliabilities were studied for Writing Sample ratings; and coding schemes for free-response items were constructed and interrater agreement ascertained.

Data were collected using these instruments under conditions that were made as uniform as possible, but often the data were late and sometimes could

TABLE 3.1

OUTCOME DATA COLLECTION SCHEDULE, FY74

Instrument	Early Collection		Midyear Collection		Year-End Collection	
	Dates	Groups*	Dates	Groups*	Dates	Groups*
1. Resource Questionnaire			2/74	Active RPs		
2. Resource Interview			2/74	Active RPs RO Coordinators	5/74	Active RPs RO Coordinators
3. Parent Questionnaire			2/74	FWS Parents		
4. Midyear Parent Interview			2/74	FWS Parents		
5. Student Questionnaire			1/74	FWS		
6. Midyear Student Interview			1/74	FWS, Control		
7. Student Background Summary						
a. Part I	9/73	FWS, Control	1/74	OPS Representative		
b. Part II	9/73	FWS				
8. Initial Planning Form	9/73	FWS			see SPPS	
9. Student Plans and Perceptions Summary						
a. Part I					5/74	FWS, Control, OPS Representative
b. Part II					5/74	FWS
10. Student Change Scales					5/74	LCs
11. Attitudes Toward Learning			1/74-2/74	FWS, Control, OPS Representative		
12. Job-Related Attitudes	9/73	FWS	1/74-2/74	FWS, Control OPS Representative	5/74	FWS, Control, OPS Representative
13. Iowa Tests of Educational Development	11/73	FWS, Control			5/74	FWS, Control, OPS Representative
14. Writing Sample (essay)	8/73	FWS			5/74	FWS

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*See Table 3.2 for definitions of these students samples. RP = Resource Person. RO = Resource Organization. LC = Learning Coordinator.

not be collected in the quantities planned. Care was taken that the data be correctly punched and that various analyses be correctly performed. The data collection instruments listed in Table 3.1 were completed by the following groups: resource people, parents, FWL-EBCE staff, FWS students, comparison students from Oakland public high schools, and professional interviewers.

The interview schedules should be given special note since all the interviews were conducted by external contractors who also analyzed and interpreted the content. Such an externally managed effort was selected to provide a fresh perspective and a means of accumulating data that would complement and enrich the spectrum of instruments used in the study.

Of the fourteen instruments listed in Table 3.1, those numbered 1-5 and 10-14 are introduced in the parts of this section in which data are presented and interpreted. Instruments 6-9 are discussed briefly here because they were used to provide data for more than one topic, due to the heterogeneity of the items in the instruments. More detailed descriptions appear in the appendix as do copies of most of the instruments.

Item 6: Midyear Student Interview.

> Information was collected on a face-to-face basis by professional interviewers experienced primarily in market research surveys and with no prior experience in or knowledge of Far West School. The bulk of the interviewing was done by two interviewers who were randomly assigned to interview students from the various groups. Sixteen FWS students and 14 OPS students were interviewed. During the interviews, which were tape-recorded, the interviewers also wrote the students' responses on questionnaire forms. Afterward, the interviewer listened to the tapes for omitted, additional, or corrected information for the forms. The information on the questionnaires was coded by two professional coders who did not assign responses to predetermined categories but rather developed categories for each question from the interviewer's written responses. Generally a category was established if more than one response defined it; unique responses were placed in an "other" category. Since the percentage bases are small, any percentage differences between groups on any item of information should be viewed with caution. Tables associated with student interviews appear in Appendix C.

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*Although not listed in Table 3.1, there were other sources of data used for evaluation. These are described and discussed in the two succeeding chapters: Outcome Backup Research and Model Development and Implementation.

Item 7: Student Background Summary.

Most items in the Student Background Summary were developed jointly with the other three NIE-EBCE projects. This instrument was administered at the beginning of the year. The questions repeated in the Student Plans and Perceptions Summary (SPPS), (test 9), administered at the end of the year, ask for post-secondary plans (one year after) and long-range plans (five years after).

Item 8: Initial Student Planning Form.

Like Test 7, this test was administered early in the year and repeated in part at year-end in the SPPS (test 9). Items in common had to do with activity and career interests and judged school progress in relation to expressed needs for assistance.

Item 9: Student Plans and Perceptions Summary.

The title "Student Plans and Perceptions Summary" designates a compilation of questions and rating scales administered at year-end. Some items appeared in instruments administered early in the year, as indicated above. The instrument contains two parts: Part I was administered to all student groups and Part II only to FWS students. Major purposes for the instrument were: (1) to obtain year-end opinions of the students on their respective school programs, (2) to compare FWS students' future plans and current interests with those of Oakland Public Schools (OPS) students, and (3) to obtain information from FWS students on the success of specific aspects of the FWS program.

See Appendix C for more detail.

Groups and Procedures for Analysis

Results are presented separately with each question explored. Major comparisons were the FWS experimental group versus OPS control group, and the FWS Entering Students versus OPS Representative Students. (See Table 3.2 for identification of student groups.) Some results were also obtained for all FWS students versus all comparison students. Statistics have been used for inferential purposes only when the FWS experimental group was compared with the OPS control group.

The outcome evaluation involved many statistical analyses, some of them involving considerable complexity. Consistency of results over different comparision groups and measures was taken as evidence supporting or not supporting hypotheses concerning FWL-EBCE effectiveness.

A variety of statitical treatments were employed, including analysis of covariance, independent group t-test, Chi-square test for interaction reliability analysis, and multivariate analysis.

TABLE 3.2

IDENTIFICATION OF STUDENT GROUPS

Group	Type	School	Status	Selection Method	Midyear* N	Endyear * N
A	--	FWS	Returning	Criterion selection previous year	14	11
O	--	FWS	Entering	Criterion selection summer 1973	4	3
B	--	FWS	Entering	Criterion selection spring 1973	20	19
C	Experimental	FWS	Entering	Random selection summer 1973	17	13
					41	35
D	Control	OPS	--	Random selection summer 1973	14	12
E	Representative	OPS	--	--	31	24

*Attrition of students during the year resulted in a mid-year enrollment of 55 and a year-end enrollment of 49, as described in Chapter 2. In analyses based on the mid-year collection, N = 55. In analyses based on the year-end collection, data were deleted for two students who completed only part of the summative battery and for the one student who had returned to FWS after a semester in junior college. Therefore, for year-end analyses, N = 46.

The analyses were carried out using a number of different facilities. Much of the basic work of subscale scoring and generation of descriptive statistics was carried out by a subcontractor. These data were then processed by the Far West Laboratory computer, the University of California at Berkeley's Computer Center, or in the case of the analyses of covariance, by the Educational Testing Service Data Processing Center. Where statistics had been obtained in early collection periods for students not present for later collection periods, the statistics were recomputed with the reduced number. Thus, the N for the analyses varies somewhat.

PERCEPTIONS, ATTITUDES, AND OPINIONS ABOUT FWS

Students

Student Questionnaire

The evaluation directors of the four EBCE projects agreed to collect information from EBCE students concerning their opinions about various aspects of the program. For this purpose, a set of 38 questions was prepared covering reasons for entering the school, general attitudes toward the school relative to others the students had attended, and opinions about particular aspects of the school program. The questions were presented so students could answer each on a 5-point scale, with the two end points of the scales labeled "Definitely Yes" versus "Definitely No," "Poor" versus "Excellent," or "Not at All Important" versus "Extremely Important," according to the nature of the questions. The student opinion questionnaire is presented in Appendix C of this report. It was used by all four EBCE sites.

The questionnaire was designed to obtain opinions about the particular features of EBCE at the four sites, and so could not be meaningful to students in control or comparison groups. The decision was made that a positive or negative opinion about the Far West School would always be indicated by marking the same end of the scale on a given item, since this would simplify the task of the students responding to the questions. In making this decision, the EBCE evaluators recognized that a positive or negative response set could have an influence on the responses to particular questions, thus possibly making individual question responses somewhat less accurate. It seemed best to use a simple method that could be biased in this way rather than risk the antagonism toward the entire data collection activity that might result from the use of more elaborate methods necessary to reduce the response bias.

The questionnaire was administered to all FWS students, but the data and interpretation presented here are based only on those students who entered in September 1973. The results from this questionnaire are presented in Table 3.3. The response to all of the questions indicated generally positive opinions about the Far West School. Therefore, it seemed essential to establish some criterion for interpretation of these responses that would allow for the identification of the strongest features of the school and of those which may need improvement. First, the 5-point responses were reduced to three response classes: positive, neutral, and negative. This reduction was based on the assumption that the choices between degrees of positive or negative opinion were largely idiosyncratic and that the development of a much more sensitive instrument would be required to distinguish these with any real reliability. Second, the average number of neutral responses on all of the items was determined, and the assumption was made that if students were responding at random, half of the remaining responses would be positive and half negative. This procedure permitted the determination of a set of expected frequencies for random responses of the 39 students who had entered FWS in September 1973. Two students who entered at that time did not complete the questionnaire.

When tested against this criterion, all of the responses yielded statistically significant Chi-square values, indicating that the students were positive about the school and all of its features. This analysis was judged inadequate for identifying the school's outstanding features, so the responses were further reduced to positive versus neutral or negative responses. The positive responses were then tested against a random-response criterion of 50% positive and 50% neutral or negative, using a t-test. Twenty-nine of the 38 questions yielded t-tests in excess of 2.00, so it was concluded that students are positive in their opinions on most, but not all, of the features of FWS.

The problem of positive-response set mentioned above made the interpretation of the resulting t-tests still somewhat uncertain, however. The decision was made to use the average value of "t" as a criterion for the identification of the features of the FWS program about which the students were most positive, as opposed to those features which, while positive, could be improved. This average value was 2.96; as it turned out, the minimum value for any t-test in excess of this was 3.25, which is, of course, a very conservative value as an indicator of positive opinions about the school.

TABLE 3.3

FREQUENCY OF STUDENT OPINION RESPONSES AND VALUE OF "t"
FOR POSITIVE RESPONSE BY OPINION CONTENT CATEGORY

Content Category	Question	Response Group			"t" Test Value
		Negative	Neutral	Positive	
General Program	1. Have you liked attending the career education program?	1	0	38	6.17*
	33. In comparison with past experiences in regular schools, how motivated are you to learn in the career education program?	0	1	38	6.17*
	31. In comparison with regular schools, how much opportunity did the career education program provide you for learning about occupations?	0	2	37	5.84*
	2. If you had it to do over again, do you think you would decide to participate in the career education program?	2	2	35	5.19*
	23. Would you say the career education program has helped you form career plans?	0	5	34	4.87*
	24. Would you say you've learned a lot while attending the career education program?	2	4	33	4.54*
	26. How would you rate the general quality of the career education program?	1	7	31	3.90*
	21. Through your experiences in the career education program, have you learned a lot about opportunities for the future?	2	6	31	3.90*
	32. In comparison with regular schools, how much opportunity did the career education program provide you for general learning?	4	7	28	2.92
	25. How well organized and coordinated do you think the career education program has been?	4	10	25	1.95
	6. Do you get enough feedback about how well you are doing in the program?	9	9	21	0.65
Resources	19. In general, have you felt welcome at the employer/resource sites?	0	6	33	4.54*
	10. Have you had enough choice in selecting the types of employer/resource sites you visit?	4	2	33	4.54*
	7. Have you had enough choice in deciding the amount of time you spend at employer sites?	2	6	31	3.90*
	8. Have you had enough choice in deciding the amount of time you spend in learning academic subjects?	5	5	29	3.25*
	29. How would you rate the general quality of the career education program employer/resources you've worked with?	3	10	26	2.27
	16. In general, were the employer/resource personnel involved in the career education program aware of your needs and interests?	5	8	26	2.27
	9. Have you had enough choice in deciding what you do at employer/resource sites?	6	7	26	2.27
	18. In general, have the employer/resource sites you've visited been interested in the career education program?	2	13	24	1.62
	17. In general, at employer/resource sites did you get to actually do things rather than just listen?	11	8	20	0.33
	20. Do most of the employer/resource sites you have worked with let you know how you're progressing?	7	18	14	-1.62
Activities	4. In the career education program, have you felt that you could progress at your own rate?	2	4	33	4.54*
	3. Have the activities available in the career education program been interesting to you?	1	6	32	4.22*
	27. How would you rate the personal counseling available in the career education program?	3	4	32	4.22*
	28. How would you rate the career counseling available in the career education program?	3	9	27	2.60
	5. Have you seen much of a relationship between your activities in the learning center and the careers you have learned about?	1	14	24	1.62
Work and Jobs	14. In general, are you looking forward to working in a job?	2	5	32	4.22*
	15. Do you think you have much choice of occupations?	1	7	31	3.90*
	12. Do you think that if a person works hard enough, he can achieve anything?	5	4	30	3.57*
	11. Do most people receive much satisfaction from their work?	6	12	21	0.65
	13. Do you think that the main reason a person works is to earn money to live?	11	9	19	0.00

* Indicates a positive opinion. See text.

How did students perceive the general program?

The students were in general quite positive about attending FWS and felt more motivated to learn than at their previous school. If faced with the choice again, they said they would enroll again in the program. They were also quite positive in responding that the school provided more opportunities to learn about the future, to form career plans, and to learn about jobs than their previous school. Although the students were not predominantly negative about any aspects of the program, they were less positive about the organization of EBCE and the feedback they received about their learning.

How did students perceive the external resources?

When asked their opinions of the resources available to them, students were very positive about the amount of choice they had in selecting employer sites and determining the time they spent at the sites; they had very positive opinions of the welcome they received at the sites. The students were somewhat less positive, or more uncertain, in their opinions of the general quality of the employer sites, the opportunities to do things rather than just listen at the employer sites, the interest in EBCE on the part of the employers, and the employers' awareness of student needs and progress.

How did students feel about the program activities?

The very positive opinions students held about activities in the program related to their interest in these activities, the fact that they could progress at their own rate, and the kind of personal counseling they could get. They were less positive about the apparent relation of activities at the learning center to the careers about which they were learning and the career counseling they could get in the program.

Student Interview

How does FWS differ from regular high school?

The FWS students were unanimous in their judgment that FWS was indeed different from regular high school, and most of them (94%) preferred FWS to regular high school. The main reasons given for the difference were that at FWS the student could get practical experience (50%), and learn what he wanted on his own schedule (31%); there was room for individuality (25%), preparation for the outside world (19%), and he had more freedom (12%). (See Appendix C.)

How do they view the learning coordinator's job?

The learning coordinator was viewed as a friendly, helpful advisor. The statements mentioned most often were "helped me find RPs, ROs, CRs" (50%) and "like a close friend; easy to talk to" (44%). No student characterized the LC's job as that of a "teacher," although his monitoring function was expressed by some with such responses as "checks up on my activities" (12%) and "makes sure I fill out forms right" (6%). The perception of the learning coordinator's job did not differ greatly for the three LCs. (See Appendix C.)

How do students feel they have benefited from experience with the resource persons?

Nearly all FWS students (94%) said they had benefited from their experiences with the resource persons. The reasons given most frequently were that they "learned something" or "learned a lot" (62%) and that the resource person helped them to decide on a career (12%). (See Appendix C.)

How do students feel they have benefited from their experiences with resource organizations?

Most FWS students (56%) felt they had benefited from the resource organizations, but some students (31%) were sure they had not benefited. (See Appendix C.)

How do students feel they have benefited from experience with community resources?

Again, most FWS students felt they had benefited from the community resources (56%), while 12% said they had not. (See Appendix C.)

How did students rank the resources in importance?

The FWS students were asked to rank the resources in order of their importance to them. The order was the resource person (75% first-place votes), the community resource (12%), and the resource organization (6%). The major reasons for ranking the resource person first were that he offered a one-to-one relationship (44%) and that one can learn more or learn a lot with a resource person (38%).

What did students like best and least about their own school?

More FWS students (75%) than control students (29%) had overall, unqualified, positive attitudes about their school. More control students (50%) than

FWS students (none) had an overall, unqualified, negative attitude about their school. The "opportunity to make own schedule" was mentioned by more FWS students (44%) than control students (7%). A "particular teacher or particular class" was mentioned by most control students (89%) as what they liked best, but not at all by FWS students. The things liked least by FWS students were filling out forms (31%), tests (19%), and poor organization at FWS (19%). Some control students said their school was all bad (36%); others said that the classes they wanted were always filled (14%), and that they did not learn much (14%). (See Table 3.4 for results.)

The FWS students were asked whether they preferred the Far West School or the regular high school and what school activities they missed. (See Appendix C.) Nearly all FWS students (94%) preferred Far West School; only one student preferred regular high school. The regular school activity missed most by FWS students was sports (31%). A few students missed their friends and some specific courses, but most students (56%) had not missed anything from regular high school.

Student Attitudes Toward School and Learning

The FWS-EBCE staff prepared a questionnaire on opinions about school and learning with 21 items: 9 open-ended questions and 12 objective questions. It was administered in January 1974 to students enrolled in the Far West School program and to students belonging to control and comparison groups.

The results are first discussed in terms of the differences between the FWS Experimental Group C and the OPS Control Group D. The rationale for this comparison is based on the fact that these two groups are the only randomly assigned groups and therefore the only instance where differences between groups might be attributed with some confidence to program effects. A brief discussion of the differences between two other groups, those entering FWS in fall 1973 (Group OBC) and the OPS sample (Group E) follows. The differences between the experimental and control groups provide an opportunity for the reader to gain some impressions as to the impact the FWS program may have had on the participating students in general. The impressions must be tempered by the knowledge that selection procedures and initial differences in people might have compounded whatever program effects exist.

Not all of the 21 questionnaire items are included in the following presentation. Some of the objective items were eliminated or not examined because they

TABLE 3.4

ATTITUDES ABOUT SCHOOL REFLECTED IN STUDENT INTERVIEWS

Student Characteristics	FWS Experimental N=16 %	OPS Control N=14 %
Overall positive attitude	75	29
Overall negative attitude	-	50
Both positive and negative attitudes	25	21
Liked best about school:		
Opportunity to explore interests	12	-
Opportunity to make own schedule	44	7
Everyone gets along	37	14
Freedom/independence (unspecified)	25	-
Explore life outside/in community	6	-
Exploring jobs	6	-
Particular teacher/particular class	-	89
Liked least about school:		
Filling out forms/too many forms	31	-
All tests/tests are worthless	19	-
Things take too long to get done	6	-
Poorly organized/should be better organized	19	-
Staff cut off from students/need more information	-	-
Students don't have enough say	-	-
Don't like it/the school is bad	-	36
Classes wanted are always filled	-	14
Didn't learn much	-	14

were ambiguous or judged distractor items; others because all the students chose the socially desirable response. Some of the open-ended items were not included because a large proportion of responses were program-specific and comparisons between groups could not be made. In addition, items which did not have any of the above characteristics are not reported if they did not differentiate between the experimental and control groups. The disposition and detailed results of each of the 21 items may be found in Appendix C.

In reporting differences between groups, several things have been kept in mind. First, though results have not been given for all responses, the response categories with the highest frequency have always been included. Second, absolute differences in percentages have always been tempered by a consideration of the total number of people in the group, the distribution of responses over the categories, and what information the question was requesting. In the comparison of the experimental with the control group, t-tests utilizing proportions were used when appropriate; i.e., for some of the open-ended questions, t-tests could not be performed because coding categories were collapsed. No tests of significance were performed on the differences between entering students and the OPS comparison Group E because initial group differences made tests inappropriate.

What are the comparative attitudes toward school and learning between the experimental and control groups?

In comparing the responses of the experimental group with those of the control group, several important distinctions between the two sets emerge. The control group's opinions about school and learning seemed typical of a traditional high school program. They were not particularly enthusiastic about their school and did not feel they had any opportunities to choose what they would study (see Table 3.5). In contrast, the experimental group indicated they felt unlimited opportunities to choose what they would study and were rather positive about the Far West School. (This is to be expected, of course, since most experimental groups involved in personalized innovations are excited about it.)

Although the control group indicated an interest in learning about specific school subjects, they were not as interested in the things they were presently learning as was the experimental group. They felt they learned most from people who helped them plan their work, and felt the best way to teach someone was to

TABLE 3.5

ITEM 5: WHAT OPPORTUNITIES DO YOU HAVE IN YOUR PRESENT SCHOOL TO CHOOSE WHAT YOU STUDY?

Coding Categories Used For Comparisons	FWS Experimental K=18 N=17		OPS Control K=16 N=14		FWS Entering K=52 N=41		OPS Representative K=45 N=31	
	f	%	f	%	f	%	f	%
Unlimited opportunity*	10	56	1	6	28	54	3	7
Not offered wide variety of/not many courses to choose from	0	0	2	13	0	0	3	7
Do not give courses I want; no courses I'm interested in	1	6	1	6	1	2	0	0
Not much/no opportunity to take what I want; not allowed to choose	0	0	2	13	0	0	4	9
Other responses**	5	28	10	63	19	37	33	73
Do not know	2	11	0	0	4	8	2	4

* $p \leq .01$ for experimental versus control.

** Non-differentiating or program-specific responses. See text.

NOTE: Percentages are based on the total number of responses (K). Because students gave more than one response, K may be larger than the number of students in the group (N), but not every student responded to every question.

show them, or explain it (see Table 3.6). The control group was shown to have a more negative attitude about the worth of their program on both of the items requesting a description of the program's benefits.

The experimental group, on the other hand, showed a more independent work style in describing the people they learn most from and the best way to teach. More than the control group, the experimental group tended to think that practical experience is the best teacher. They were also more career-oriented than the control group, and less academically oriented in descriptions of their progress.

TABLE 3.6

ITEM 8: WHAT IS THE BEST WAY TO TEACH SOMEONE SOMETHING?

Coding Categories Used for Comparisons	FWS Experimental K=18 N=17		OPS Control K=17 N=14		FWS Entering K=48 N=41		OPS Representative K=38 N=31	
	f	%	f	%	f	%	f	%
Practical experience/ experience/do it/try it/ let them do it	4	22	1	6	16	33	5	13
Explain it/show how to do it/go over step by step*	2	11	6	35	8	17	9	24
Teach something they are interested in/something they want to learn	1	6	1	6	3	6	7	18
Other responses**	11	61	9	53	21	44	17	45

* $p \leq .10$ for experimental versus control

** Non-differentiating or program-specific responses. See text.

NOTE: Percentages are based on the total number of responses (K). Because students gave more than one response, K may be larger than the number of students in the group (N), but not every student responded to every question.

What are the comparative attitudes toward school and learning between FWS students entering in the fall and the representative OPS sample?

As might be expected, the FWS group entering in fall 1973 is very similar to its subgroup, the FWS experimental Group C. The OPS representative group is very similar to the OPS control group. The FWS groups are highly positive about experiences at the Far West School. More than the OPS representative sample, members of the FWS entering group are learning about things that interest them, and they feel their program is far better than programs at previous schools. FWS entering students seem to be positive in their feelings about the school. They feel they have an unlimited opportunity to choose what they study and feel their program is good both for academic work and career planning.

SPPS, Part II

What are FWS student perceptions of their program at the end of the school year?

Reactions were generally very favorable. All Far West School students felt that students were getting at least "something" out of the FWS program; half of them felt that students were getting "a lot out of FWS." (See Table 3.7.) The impressions of the group of first-year FWS students indicate that they are very well satisfied with the FWS program in comparison with previous schools attended. (See Table 3.8.)

FWS students were also asked "what advice or comments do you have for the FWS staff?" Responses fell into three areas (see Table 3.9):

TABLE 3.7

END-OF-YEAR STUDENT OPINION OF FAR WEST SCHOOL PROGRAM

Item No.	Item	FWS Entering
18.	The amount of personal freedom allowed students was:	
	Not enough	2
	About right	30
	Too much	2
14.	The amount of work required of me was:	
	Too little	3
	About right	30
	Too much	1
13.	How do you judge the help you received in planning your activities?	
	Needed more help	4
	About right	25
	More than was needed	5
16.	The other EBCE students were (by and large):	
	Cold and/or impersonal	0
	Can't say either way	4
	Warm and/or friendly	30
20.	The resource persons you met were generally:	
	Dull and boring	4
	Can't say either way	9
	Interesting and enjoyable	25
22.	The resource organizations visited were:	
	Dull and boring	4
	Can't say either way	4
	Interesting and enjoyable	25 *
15.	The staff of FWS was (by and large):	
	Doing a poor job	0
	Can't say either way	11
	Doing a good job	23
19.	The things the resource persons offered seemed:	
	Of little use	1
	Can't say either way	11
	Useful	22
21.	The things the resource organizations offered seemed:	
	Of little use	4
	Can't say either way	7
	Useful	22 *
17.	Generally, the other EBCE students seemed to be getting:	
	Little or nothing out of FWS	0
	Something out of FWS	16
	A lot out of FWS	16 *

* Item was left blank by one or more students

TABLE 3.8

STUDENT COMPARISON OF FAR WEST SCHOOL AND OTHER SCHOOLS ATTENDED

Item: When you look back and compare your Far West School experiences with those you had in the schools you attended before, you are:	FWS Entering Students N=35
Much less satisfied with Far West School than with the others.	0
Somewhat less satisfied with Far West School than with the others.	0
About as satisfied with one as with the other.	1
Somewhat more satisfied with Far West School than with the others.	3
Much more satisfied with Far West School than with the others.	31

TABLE 3.9

ADVICE AND COMMENTS TO STAFF BY FWS STUDENTS: DISTRIBUTION OF RESPONSE TYPES

Type of Response	Grade Level								Total	
	10		11		12					
					Entering		Returning			
	f	%	f	%	f	%	f	%	f	%
General positive observations about school and staff	7	50	4	36	3	25	2	22	16	35
Statements with a predominantly negative tone	3	21	1	10	0	0	0	0	4	9
Specific criticisms and suggestions	4	29	3	27	8	67	4	45	19	41
No response	0	0	3	27	1	8	3	33	7	15
TOTAL	14	100	11	100	12	100	9	100	46	100

Generally positive observations about school and staff. Examples:

> "Keep up the good work."
>
> "I am definitely glad I came here and benefited from the program, not saying that I learned a lot because I took advantage of the school but it taught me a lesson."
>
> "Everybody did a good job. This school year was very successful."
>
> "Well for one Far West has a very nice staff. There's never a dull moment when you're around one of them. They're very friendly, warm and they treat you as though you were one of their own kids."

Statements with a negative tone. There were only four statements (all from younger students) which seemed predominantly negative in feeling. Examples:

> "The advisors are great but I could not say much for the rest."
>
> "FWS didn't do a very good job of helping every one this year."

Criticisms and suggestions. Suggestions from the tenth- and eleventh-grade students were centered on details of curriculum (resources, packages, meetings). Twelfth-grade students, both first-year and returning, were much more direct in offering suggestions to the FWS staff on improving their effectiveness in the program. The specific suggestions made by the FWS seniors to the FWS staff when asked for "advice and comments" are listed below.

1. "Far West needs student counseling or some person who knows our program and can tell a student off in a tactful manner."
2. "Not to be so loose with some students. The ones that need more help they should give more attention to."
3. "Don't get too big because you might lose RP, RO, CR by too many people missing appointments."
4. "Need more LCs. Explain more in Orientation. Push students a little more to do work."
5. "Keep up the good work, but cut down on the number of forms and tests."
6. "Not to get uptight in proportion to the increase projected student body 75-76."

7. "Listen a little more to the things students say--especially reading between the lines of what is said. Sometimes the rush is too important. Deadlines occasionally outweigh students."

8. "I advise Far West to get three more LCs on the staff and to get their shit together a little better."

9. "There is a need for more advisors on the staff."

10. "I think the staff has good intentions but don't always get full cooperation from students. The staff sometimes needs to put more pressure on students about getting something done."

11. "Doing a good job, but they might be a little too lenient."

12. "Somehow find a way, forcefully or through coercion to get students more productive with their time and use of RPs, ROs, and staff."

It appears that although FWS students express general satisfaction with the program and with the staff, the older students are well aware of the inherent conflict between staff and students in a program that attempts to substitute inner motivation for external direction.

Parents

Parent Questionnaire

Parents of students were asked to give their opinions of FWS through a questionnaire asking open-ended questions intended to explore the strengths and weaknesses of the program; positive and negative changes they had noted in the student, types of students they felt would benefit most from the program, and how they had learned about the program. Fifteen Likert-scale items asked parents about program effectiveness, operation, and impact. (See Appendix C for complete questionnaire.)

The questionnaires were mailed to the parents or guardians of all 55 students. At least partially completed forms were returned by 36 (65%) of the parents. The returned questionnaires appear to be a representative sample in terms of student-group membership (see Table 3.10 below) and also student grade level and sex, and LC-group membership.

TABLE 3.10

COMPARISON OF NUMBER OF PARENT QUESTIONNAIRES PROCESSED TO SIZE OF STUDENT GROUP

Part of Questionnaire	Student Group				
	Total FWS	FWS Returning	FWS Entering	FWS Spring Selection	FWS Experi-mental
	N=55	N=14	N=41	N=20	N=17
Part I: objective questions processed	34	9	25	14	9
Part II: open-ended questions processed	36	9	27	15	10
Percent of total group for open-ended questions	65%	64%	66%	75%	59%

Objective responses on the questionnaire were coded, and frequencies of responses obtained in the various categories. Open-ended questions were analyzed, and categories of frequently recurring responses were obtained. Because certain parents left some of the questions unanswered, statistics were calculated solely on the basis of the number of parents responding to the particular question.

Table 3.11 describes the fifteen items that are in Likert-scale form. Responses for these items were made on a 5-point scale, and mean scores for each item were computed using the original responses. The frequency distribution in Table 3.11 reduces the 5-point scale to three catagories: negative (level 1-2), neutral (3), and positive (4-5); the items are ordered in Table 3.11 on the basis of the mean ratings.

What was parent perception of the overall program and the effect on their sons and daughters?

As indicated by Table 3.11, parents were almost unanimous in their opinion that their child liked FWS better than schools attended previously. They also

TABLE 3.11

PARENT OPINIONS OF EBCE PROGRAM RANKED BY MEAN

No.	Question (Abbreviated Statement)	Reduced 3-Level Scale				Mean of 5-Level Scale
		Neg.	Neut.	Pos.	Omit	
3	How well does your son or daughter like the program compared with past school experiences?	0	2	32	0	4.79
7	How much opportunity does the program provide for learning about occupations?	1	0	33	0	4.76
10	How motivated is your daughter or son to learn in the program?	0	2	32	0	4.62
2	If you had it to do over again, would you want your son or daughter to participate in the career education program?	1	5	28	0	4.44
20	How would you rate the enthusiasm of the career education program staff?	0	4	25	5	4.34
11	How would you rate the approaches to learning in the program?	0	6	27	1	4.27
1	How well does the program compare overall with past school experiences?	0	8	26	0	4.24
8	What effect has the career education program had on helping your son or daughter form career plans?	0	5	29	0	4.24
18	How would you rate business and community resources in the program?	1	2	26	5	4.17
17	How would you rate the general quality of the career education program staff?	1	5	21	7	3.96
19	How would you rate your overall relationship with the staff of the program?	1	9	19	5	3.93
14	How often does your son or daughter talk to you about the program?	4	9	21	0	3.82
9	How much opportunity did the program provide your son or daughter for general learning?	7	6	21	0	3.71
6	Have you received information about your son's or daughter's progress in the program?	14	11	9	0	2.71
15	How often have you had any contact with any program staff members?	15	16	3	0	2.47

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felt strongly that their child was a much more motivated student as a result of participation in the program and agreed that if the choice were to be made again, they would want their child in the program. These three items were ranked among the top four, as indicated on Table 3.11.

Out of 72 responses to open-ended questions concerning positive and negative changes in the students (with some parents listing more than one change) there were 12 references to negative change in the students. Seven of these negative responses had to do with problems related to student organization of time and activities. Positive responses included improvement in interest in school (10), in decision-making/planning (8), in confidence/poise (8), in independence, motivation, happiness (7 each), and in maturity (4). In contrast, only four respondents mentioned changes in learning or thinking: one cited an increase in career awareness and three mentioned increased student planning for the future and for college. One parent felt that the program had not led to perceptible changes one way or another.

Overall, the parents' responses were largely confined to describing positive and negative changes in the students in the area of personal growth, rather than in the area of intellectual growth. One semester may be too short a time for observable change in thinking and learning patterns. It is, however, of interest that parents felt they were able to note positive growth in their sons and daughters in the life-skills areas.

What was parent perception of the learning program at FWS?

Examination of Table 3.11 indicates that the parents as a group tended to rate highly the items concerning the unique learning aspects of the FWS program. With one exception, all items on the scale with means above 4.00 are related either to specialized aspects of the FWS learning program or to the effect of the program on the student. The group of parents also rated highly the school's ability to offer the opportunity to learn more about occupations. A similar statement on the opportunity for general learning, however, was near the bottom of this ranked distribution, although the mean was still above the midpoint of the rating scale.

What did parents see as weaknesses and strengths?

Asked to write opinions as to the weaknesses and strengths of the FWS program, parents mentioned more strengths than weaknesses. Of a total of 102 responses (some parents gave more than one answer), 35% were concerned with negative aspects of the program and 65% with positive ones. Ten parents out of 36 did not mention any weaknesses; four parents failed to mention any positive qualities.

Parent concerns about the program related to four areas: guidance, curriculum, coordination or communicating, and structure. Eleven responses expressed concern over lack of guidance and/or lack of communication among staff and students. All these responses were from parents whose children were new to the school this year. Twelve responses expressed concern over curriculum. Parents of new and returning students had comments concerning inadequate curriculum (5), poor coordination (3), and lack of structure (4). Eight parents felt students needed more adequate college preparation and information. Five parents expressed a need for more communication between school and parents.

When parents were asked to write on strengths of the program, the most frequent response given (28) related to an aspect of student growth. Twenty responses emphasized the unique curriculum aspects of the EBCE program while 18 responses supported the characteristics of the school itself. (See Table 3.12.)

TABLE 3.12

GREATEST STRENGTHS OF THE CAREER EDUCATION PROGRAM AS REPORTED BY PARENTS

Category	Characteristic Strengths	No. of Responses	Total
Student growth	Act independently and responsibly; make decisions	16	28
	Increase confidence, ability to deal with others	4	
	Increase motivation	8	
Curriculum	Career exploration	11	20
	Experience-based work with adults, community	9	
School characteristics	Lack of regimentation; less structured; more open	7	18
	Individualized guidance; small school	11	

How did parents perceive the staff at FWS and the parent-staff relationships?

Parents were asked to rate staff on enthusiasm and general ability. Although the mean rating for staff quality would be at the "very good" level, enthusiasm was rated even higher. It was placed in the midst of the upper group of items in Table 3.11, which may indicate that, at least for this group of parents, staff attitude is an important program element.

Parents saw their relationship with the staff as mildly positive, but they rated at the bottom of the list (with means below 3.00) the two items having to do with staff/parent communications. Sixteen parents indicated that they had attended no parent meetings in this school year; fourteen had attended one meeting and four attended more than one. Fifteen parents rated their contact with staff as "almost never" or "seldom" while another 16 were at the neutral level. Only nine parents felt they had received enough, or almost enough, information from the staff. Most of the omitted items on the questionnaires, moreover, had to do with parent-staff ratings, indicating that parents lacked enough contact to feel comfortable rating staff members. It appears clear that the parents' primary source of information about the program and staff at FWS comes from the students rather than from direct contact with the school.

Which students did the parents feel would benefit most from EBCE?

Thirty-three parents provided 52 responses to this question. As Table 3.13 indicates, parents did not see the school as being primarily useful to "problem" students in need of guidance and motivation. There are only five responses in that area, while 25 parents mentioned intelligence, motivation, self-discipline, and independence as well as other qualities associated with "good" students. Eleven parents saw the program as advantageous for students who did not respond to the regular public school program.

TABLE 3.13

KIND OF STUDENT WHO BENEFITS

Kind of Student	Responses
Wants to learn, good student, intelligent, motivated to learn	13
Mature, self-disciplined, independent	12
Doesn't respond to structured academic high school	11
Wants career orientation program	7
Needs guidance, direction, small school, not motivated	5
Some, most, all students	4

Parent Interviews

Parent interviews were conducted by an outside contractor. Parents of the FWS experimental group and parents of second-year students were interviewed (N = 26).

What were the parents' attitudes about Far West School?

(See Appendix C.) Most parents (65%) had a totally positive attitude about the Far West School, some parents had both positive and negative attitudes (27%), and a few parents had only negative attitudes (8%). The most frequent positive comments were that FWS offered an excellent practical program (23%) and that their children liked it better than regular school (23%). The most frequent negative comment, that there was not enough communication with the school, was also frequently voiced when parents were asked if they wanted more information about the school.

How was communication between students and parents affected?

Most parents (69%) said the student talked with them about the program at Far West School; only a few parents (8%) said the student did not talk about the program at all. Most of the student and parent discussion about the program was about the projects the student was doing and his experiences in the field (58%). (See Appendix C.)

What changes in their sons and daughters had parents observed?

Table 3.14 illustrates the generally positive attitude that parents have about the Far West School and the effect it is having on their children. They perceive their children as being more interested in school and working harder; being more responsible, more confident, more mature--in general, more motivated and doing a better job than before. (See also Appendix C.)

TABLE 3.14

PARENT INTERVIEW: POSITIVE CHANGES OBSERVED IN STUDENTS

Change	Percent of Parents Observing the Change (N=26)
More interested in school now; more involved	85
Working harder now; concentrating	65
More responsible now	54
Has more confidence in self; more self-worth	50
More mature/adult/grown-up	42
Plans to go to college now	38
Still not sure; changes mind about future	31
Goes to school regularly now; never did before	19
Gets homework done now	19
Seems happier now	15
More motivated now	12
Reads a lot now	8

How do parents compare FWS with regular high school?

In comparing Far West School with the regular high school, some parents said that FWS was much better all around (23%), that the student worked more and talked more about his work at FWS (19%), and that the student had more freedom (15%). But some parents also said they did not know enough about FWS to compare it with regular high school (12%) and that FWS should have more classroom-type teaching (8%). (See Appendix C.)

Resources

Resource Questionnaire

A questionnaire was used to gather descriptive information about the resource site, student-resource relationships, and the perceptions and attitudes of the resource person (or his organization) toward EBCE.

In view of the complex nature of the resource questionnaire and the fact that a good deal of time was required to complete it, the instrument was sent only to resources involved in at least one Exploration or Investigation (an interaction with one or more students taking more than 10 hours), or in more than one Orientation (an interaction of less than 10 hours).

The number of questionnaires sent to and completed by each resource type is shown in Table 3.15. Not surprisingly, reaction to the task of completing a form of this complexity was often negative, despite an extraordinary amount of staff time and energy spent in telephone calls and personal visits following the resource person's receipt of the questionnaire. The overall rate of return was 60% (36), though many of these respondents did not complete the entire questionnaire. Consequently, results have been calculated on different bases.

TABLE 3.15

NUMBER OF RESOURCE QUESTIONNAIRES SENT AND RECEIVED AND PERCENT RECEIVED FOR EACH OF THREE RESOURCE TYPES

Questionnaires	Resource Persons		Resource Organizations	Total
	Staff-Developed	Student-Developed		
Number sent	25	23	12	60
Number returned	21	10	5	36
Percent returned	84%	43%	42%	60%

When the questionnaires were returned it was noted that a typical respondent had participated in the program from four to five months. Four, however, had participated approximately one month, and another four had participated one year or longer. The responses were coded numerically when possible; open-ended questions were categorized for the frequency of recurring responses; counts were made for each item and appropriate percentages calculated. (The form of the questionnaires and the basic statistics for individual items can be found in Appendix C.)

For purposes of exposition, the data are assembled in three major categories: descriptive, program operations, and program impact. Table 3.15 includes a breakdown of response rate for resource persons and organizations recruited by staff as opposed to recruitments by students. The respondents represent a diversity of professions, business, and careers in industry, education, and public service. Most respondents are located in the vicinity of Oakland-Berkeley, although several are located in the San Francisco area. Organization size ranges from companies employing a few persons to those employing more than a thousand. In the latter cases, the specific learning sites were usually subunits of the organizations. Table 3.16 gives the median number of employees in the whole organization and at learning sites for the three resource groups.

TABLE 3.16

MEDIAN NUMBER OF COMPANY EMPLOYEES BY TYPE OF RESOURCE

Type of Resource	Number of Employees	
	In Company	At Learning Site
Resource persons:		
Staff-developed	16.0	5.5
Student-developed	106.0	11.0
Resource organizations	34.0	29.5

The main reasons given for program participation are: interest (8), program goals (6), experiences offered (4), benefits to the resource (4), employer request to participate (3), enjoyment of students (2), and interest in the EBCE approach (2). The following are examples of statements by resource questionnaire respondents:

Interest:	"We're a public service agency and, of course, we're interested in developing a sense of such service in young people. Also, we feel responsibility to provide information and training that will lead to enlightened use of the environment." "I found out about it, it seemed interesting; further information from staff and students was positive; thus we became involved."
Program goals:	"The goals of the program are in agreement with many of my own personal conclusions about educational needs for young people." "I wanted to assist an education program that promised to help students make better decisions about their directions in life and jobs."
Experiences offered:	"The head of the University of California Department of Bacteriology and Immunology had previously dealt with Far West School and felt that it would be a productive experience."
Aid to youth:	"To expose high school girls to role models and show them what career options are available to them."
Benefit to resource:	"The first student was quite a good volunteer worker and we need help. The more volunteer workers we have (up to a point), the better program we can offer."
Employer request:	"It was an employer request that my company become involved, and I thought it would be interesting to participate."

How did students spend their time at resource sites?

When asked about the number of hours spent with a student during a visit, nine of 29 respondents (31%) reported one hour per student visit; seven respondents (24%) reported four hours per student.

Information reported on the amount of time students engaged in activities is reported in Table 3.17. Respondents reported that the most frequent activity at the Orientation stage was brief observation of site operations; the next most frequent activity was interaction with the resource person. Interaction with the RP became the most frequent activity reported at the Exploration stage. At the Investigation stage, interaction with the RP and performance of site activities were the most frequent activities.

TABLE 3.17

FREQUENCY OF VARIOUS STUDENT ACTIVITIES BY AMOUNT OF TIME

Activity	Amount of Time			
	Orientation (0-9 hours)	Exploration (10-39 hours)	Investigation (40+ hours)	Weighted Frequency*
Performing site activities	9	12	13	72
Interacting with me	16	13	13	71
Observing site activities	22	12	5	61
Interacting with other site personnel	12	11	9	61
Researching from site materials	4	12	5	43
Individual study	3	9	6	39

* Sum of the number of Orientations plus two times the number of Explorations plus three times the number of Investigations. See text.

What services were offered to the students by the resources?

Table 3.18 identifies the frequency with which various services were offered by resources in terms of the amount of time spent on each service. The services most frequently offered to students during Orientation were career counseling and company orientation. At the Exploration stage, the emphasis shifted to planning of student assignments, although career counseling and company orientation remained important. The Investigation stage emphasized training students to perform specific job-related tasks in the community and evaluation of individual student assignments.

TABLE 3.18

FREQUENCY OF SERVICES OFFERED BY AMOUNT OF TIME

Service	Amount of Time			
	Orientation (0-9 hours)	Exploration (10-39 hours)	Investigation (40+ hours)	Weighted Frequency*
Training to perform a specific job-related task in organization	12	9	14	72
Company orientation	23	11	8	69
Career counseling	19	11	9	68
Evaluating individual students' assignments	6	9	13	63
Planning student assignments	11	12	8	59
Personal counseling	10	9	7	49
Tutoring in academic area	8	9	5	41
Assisting students in non-job-related assignments	5	3	3	20

* Sum of the number of Orientations plus two times the number of Explorations plus three times the number of Investigations. See text.

How did resource persons assess student interest in the program?

In response to questionnaire items concerning student interest in the EBCE program or in their specific resource sites, 22 of 31 respondents indicated that students were interested in EBCE, five indicated that students were uninterested, and four felt that students were neutral. Of 32 resource respondents, 17 felt that FWS students were interested in their specific sites, seven felt that students were not interested, and eight felt students were neutral. (See Appendix C for the response-frequency data.)

What did resource persons see as strengths and weaknesses of Far West School?

The majority of respondents focused on the school's positive aspects, particularly on experiences to which students had been exposed. Twelve respondents noted the benefit to students of being able to take part in the world of work, seven cited student familiarization with a variety of career opportunities, and six respondents felt that one of the program's greatest strengths was the students' opportunity to learn responsibility. Other strengths listed by respondents included contributions of students to a job, development of new modes of education, student opportunities to work with highly skilled persons, a chance for students to become motivated to learn, provision of on-the-job training, and provision of a forum for students' ideas.

Although program weaknesses identified by respondents vary greatly, they all indicate an interest in making the program more successful. One weakness cited was the lack of organization, namely, a lack of structure in instructional settings and insufficient communication between students and FWS. Other weaknesses less frequently cited include an inability of students to fully utilize their opportunities, the cost of the program, the program's neglect of basic skills, the fact that too few students visited the resource, staff changes at FWS, lack of time to be with students, and excessive evaluation requirements.

What were the effects of the EBCE program on organizations?

Resource persons, asked if EBCE effected their organizations, noted several kinds of student impact. Their experience with students affected "company training policy," according to nine (39%) of 23 respondents. Ten of 27 (37%) respondents reported some change in the amount of work performed by employees; seven (26%) of 27 respondents noted that EBCE had an impact on the quality of employee work; and two (8%) of 24 respondents said involvement with EBCE had influenced their company's hiring practices. Although fewer than half of the questionnaire respondents answered the question dealing with the value of EBCE's impact, those who did gave a overwhelmingly favorable response. Only one respondent commented unfavorably on the effect of EBCE on the quality of employee work, and only two were unfavorable regarding EBCE's influence on the quantity of employee work. Six (75%) of eight respondents thought the EBCE program had a positive impact on training procedures and eight (57%) of 14 indicated a positive impact on the amount of work done. Eight (53%) of 15 respondents indicated a positive impact on the quality of employee work. The remainder answering the question chose the neutral response.

There were no negative employee reactions to EBCE according to the respondents. The most frequently cited benefit to regular employees was "increased awareness of youth," on which 18 (50%) of the respondents concurred. "Increased interest in their own work" on the part of regular employees was checked by seven (19%) of the respondents. Seven others noted no identifiable beneficial effect from the presence of students. A few resource persons indicated benefits such as reduced employee work loads and a higher level of motivation for training among regular employees.

Do resources support the program?

The resource persons are willing to support EBCE. One respondent indicated that he would not continue to serve (because of a lack of time). Nine persons, the majority of whom were not in decision-making positions, indicated that they did not know if they would continue to serve as resources. Twenty-six people (72%) affirmed that they would continue serving the program. When asked if they would "recommend to another person that he/she also become involved with EBCE," twenty-seven of 29 respondents (93%) indicated that they would; this further documents the support for EBCE and the likelihood of continued participation.

The primary reason given by respondents for continued participation in the program was that of helping students (six respondents). Four respondents indicated their organizations actually benefited from student participation. Other reasons less frequently cited included: a liking of students, a desire to encourage students, approval of the program, belief in the program value to students, and opportunity to familiarize students with a certain career.

The most frequently cited reason for respondents recommending EBCE participation to others was that it would increase learning opportunities and experiences for youth. Also frequently mentioned was approval of the program concept and benefits accruing to the resource organization as a result of participation. Asked what aspects of the program might encourage others to participate as RPs, respondents noted help to students, increase in student motivation and independence, and a reduction of crime and welfare.

The high rate of respondent willingness to encourage further expansion of community participation in EBCE, coupled with the reasons cited for encouraging such participation, suggests two conclusions: (1) resource persons have a high level of overall satisfaction with the EBCE concept, and (2) they are satisfied with their own perceptions of their roles as implemented in EBCE.

Respondents conveyed a strong sense of commitment to EBCE, expressing the desire both to strengthen communication among FWS staff, RPs, ROs, and CRs and to attain a better understanding of what FWS students seek to accomplish at the learning site.

Midyear Interviews

Telephone interviews were conducted by the external evaluation contractor with resource persons at midyear and at the end of the school year. At midyear, a sample of 28 RPs responded. The sample of 30 resources was chosen for interviewing from among those who had experienced at least one Exploration or two Orientations with FWS students. Two of these resources were not reached, one because of illness, the other because a new job had taken him from the area.

The interview was mainly concerned with first, RPs perceptions of how worthwhile the experiences were to them and to the students, and second, the RPs observations of changes in the students. In general, most RPs felt that their experiences were beneficial to the students and to themselves; many observed growth in the students' job knowledge and abilities. Some RPs complained about lack of communication with Far West School.

What were the reactions of resource persons to FWS students?

Most resource persons (71%) felt the experience was worthwhile to them, and a somewhat lesser number (64%) felt the experience was worthwhile to the student. The most frequent positive comments were that students learned a lot about a resource person's job and developed job skills (29%), that the student had been helpful (18%), and that the student benefited by being on the job (18%). The most frequent negative comment was that the student was not interested in the resource person's job or in what he had to say (14%). (See Appendix C.)

What changes had resource persons observed in students?

Resource persons varied widely in the amount of time they had spent with FWS students, ranging from just a few hours to many hours over several months. Some RPs felt that their time with the students was too short to observe a change (28%), some said that they had observed no change in the student (28%), while others (43%) did observe growth in the student's job knowledge and abilities during the period of their contact. (Appendix C.)

In response to the general question about ideas not covered in the questionnaire, some resource persons complained about the lack of communication with Far West School (28%). Some RPs also mentioned that students should come to the job more often or should be on some kind of schedule (21%). However, some RPs said they would like to have more students (15%), and only one said he was dissatisfied with the Far West School program.

Year-End Interviews

At the end of the year, a sample of 27 RPs responded to an interview more specific than the one at midyear. Questions concerned the relationships between the RPs and students, what the students learned from the RPs, the RPs' role in students' projects, the RPs' attitudes about the projects, and the RPs' perceptions of how effectively students used the learning experience. (See interview form in Appendix C.)

How many students were seen by RPs?

Some resource persons saw several students during the past semester, but ten of those RPs interviewed saw only one student (see Table 3.19).

TABLE 3.19

NUMBER OF STUDENTS SEEN BY RESOURCE PERSONS
DURING THE SPRING SEMESTER
(N=27 RPs)

Number of Students Seen During Spring	Number of Resource Persons
0	2
1	10
2	4
3	3
4	3
5	2
6	2
7	0
8	1

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How many students were seen at each level of involvement?

Only about half of the resource persons got beyond Orientation relationships with the students (see Table 3.20). For that reason, many RPs were not able to respond to questions about students' projects in the more intense levels of participation.

TABLE 3.20

NUMBER OF RESOURCE PERSONS
INVOLVED AT EACH LEVEL
(N=27 RPs)

RP	Level of Past Student Involvement Accomplished		
	Orientation	Exploration	Investigation
Involved	17	11	3
Not involved	3	16	24
Don't know	3	0	0
Not applicable	4	0	0

What was the RP opinion of the learning experience?

The resource persons made many diverse comments about what they thought students had learned from their RP experiences. Of 22 RPs responding to what students learned, 14 felt students had learned and had benefited from their experiences. Only one RP made a negative statement. (See Table 3.21.)

Was appropriate use made of learning experience at resource site?

Of 19 resource persons who responded to this question, 11 made positive comments. The three negative comments were mainly concerned with the students' failure to be prompt or keep appointments; the unclassified comments were mainly concerned with a lack of communication between students and RPs. (See Table 3.21.)

What was RP evaluation of student projects?

Only 15 resource persons responded to the question about the projects' worth but 12 of the responses were positive; again only one made a negative comment. Ten of 17 RPs who responded made positive comments about students giving them information about projects. Resource persons were less positive when evaluating the students' ability to seek their help in planning, conducting, and evaluating projects. Fewer than half of the resource persons who responded made positive comments about these RP roles in student projects. Resource persons were most negative about the inadequacy of the school's communication about students' projects. Of 24 RPs who responded to this question, 13 gave negative comments and seven gave positive comments. (See Table 3.21.)

Student, Parent, and Resource Common Ratings

How do students, parents, and resources rate the effectiveness of FWS student learning?

At midyear, students were asked to rate the importance and effectiveness of FWS in accomplishing learning in each of 15 areas. Resources and parents were asked to complete an identical questionnaire item, rating each of 15 student learning areas on a 5-point scale: (1 = not effective; 5 = highly effective).*

Table 3.22 presents the means for student ratings (N = 55) with the 15 learning areas re-ordered by mean for the ratings on program effectiveness. The 15 means are fairly close together. On the 5-point scale, all of them are above the midpoint, with the lowest at 3.38 and the highest at 4.49. The overall mean on effectiveness for the 15 items is 3.99

In terms of students' ratings, the FWS learning areas perceived as being relatively most effective are those areas that create awareness of career opportunities, and that help students assume responsibility for themselves, have a positive attitude toward learning, make decisions and follow through, communicate with others in a mature way, and work with others. Conversely, the FWS learning areas seen as relatively least effective are those areas that prepare students to perform basic academic skills, to perform specific occupational skills, to evaluate their own work, to have a positive attitude toward work, and to be punctual and organize time.

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*The item is the final question on each of the site-common instruments; see Appendix C.

TABLE 3.21

TABULATION OF RESULTS OF QUESTIONS ASKED IN THE END-OF-YEAR RESOURCE INTERVIEW

(N=27 RPs)

Question	Resource Person Response			
	Positive	Negative	Do Not Know	Question Not Applicable
What was the RP's opinion of the learning experience?	14	1	7	5
Did the student make appropriate use of his experience(s)?	11	3	5	8
What was the RP's evaluation of student projects?	12	1	2	12
Did the student inform the RP about his project?	10	2	5	10
Did the student seek help from the RP in planning his project?	8	8	1	10
Did the student seek advice from the RP in completing his project?	8	8	1	10
Did the student ask the RP to evaluate his project when completed?	7	7	2	11
Did FWS provide the RP with feedback on the school's reaction to the project?	7	13	4	3

TABLE 3.22

FWS STUDENT RATINGS OF PROGRAM EFFECTIVENESS AND IMPORTANCE OF 15 STUDENT LEARNING AREAS (N=55)

Item	Mean Effectiveness	Mean Importance
Be aware of more career opportunities	4.49	4.48
Assume responsibility for themselves	4.35	4.82
Have a positive attitude toward learning	4.22	4.50
Make decisions and follow through	4.18	4.54
Communicate with others in a mature way	4.14	4.42
Work with others	4.12	4.14
Improve interpersonal skills	4.04	4.28
Think through and solve problems	4.00	4.56
Have a positive attitude toward self	3.96	4.65
Prepare for further education	3.96	4.42
Be punctual and organize their time	3.90	4.42
Have a positive attitude toward work	3.75	4.31
Evaluate their own work	3.73	4.00
Perform specific occupational skills	3.67	3.86
Perform basic academic skills	3.38	3.98

Table 3.23 presents the means for parent responses to the above question. Parents are generally favorable in their ratings of the effectiveness of the FWS program in all 15 areas. All ratings' means are above the midpoint of the 5-point scale, with a range from 3.44 to 4.47. The five areas in which the program is seen as relatively more effective are those areas that help students develop positive self-attitude, become aware of more career opportunities, assume responsibility, communicate in a mature way, and have a positive attitude toward work. The five areas in which the program is seen as being relatively least effective are those areas that help students perform basic academic skills, perform specific occupational skills, prepare for further education, to be punctual and adequately organize time, and improve interpersonal and social skills.

Parents place the greatest importance on assuming responsibility (4.97 on [illegible] 5-point scale), making decisions and following through, having a positive attitude toward self, thinking through and solving problems, and having a positive attitude toward learning. The five areas of relatively least importance for parents are performing specific occupational skills, improving interpersonal and social skills, being aware of more career opportunities, evaluating their (students) own work, and preparing for future education. We need to stress the word relative: the lowest mean rating given by parents is a 4.00. In other words, parents perceive all 15 areas to be of considerable importance.

TABLE 3.23

FWS PARENT RATINGS OF PROGRAM EFFECTIVENESS AND IMPORTANCE OF 15 STUDENT LEARNING AREAS
(N=34)

Item	Mean Effectiveness	Mean Importance
Have a positive attitude toward self	4.47	4.91
Assume responsibility for themselves	4.47	4.97
Have a positive attitude toward work	4.47	4.82
Be aware of more career opportunities	4.41	4.47
Communicate with others in a mature way	4.29	4.82
Think through and solve problems	4.12	4.88
Make decisions and follow through	4.15	4.97
Have a positive attitude toward learning	4.15	4.88
Evaluate their own work	4.15	4.61
Work with others	4.12	4.68
Improve interpersonal and social skills	4.06	4.41
Be punctual and organize their time	3.82	4.85
Prepare for further education	3.79	4.62
Perform specific occupational skills	3.75	4.00
Perform basic academic skills	3.44	4.70

The FWS program is seen by parents as being most deficient in providing for performance in basic academic skills (4.70 in importance vs. 3.44 in effectiveness) and in being punctual and organizing time (4.85 vs. 3.82). Conversely, the least discrepancies occur in the area of making students more aware of career opportunities (4.47 in importance vs. 4.41 in effectiveness) and in preparing them to perform specific occupational skills (4.00 vs. 3.75).

Thirty-six resources completed the questionnaire (N = 36). Unlike the student and parent data, however, the resource data were marked by a relatively high incidence of nonresponse, particularly with respect to the ratings of program effectiveness. For some items nearly half of the respondents failed to give a rating, apparently because they felt they lacked sufficient experience (in terms of amount of time in the program and number of students they had worked with), had only a limited view of the entire program, or were unwilling to cope with this complicated item after having already gone through the complex and lengthy questionnaire.

Table 3.24 indicates that the resource people see the FWS program as being relatively most effective in preparing students to work with others, be aware of more career opportunities, have a positive attitude toward learning, have a positive attitude toward work, and assume responsibility for themeselves. The FWS program is seen as being relatively least effective in preparing students to be punctual and organize their work, perform specific occupational skills, evaluate their own work, have positive attitude toward self, and perform basic academic skills. None of the 15 areas received mean ratings lower than the midpoint of the 5-point scale in terms of effectiveness. The lowest mean was 3.10; the highest was 3.86.

In terms of importance, the resources rated the following five areas as the highest: having a positive attitude toward learning, having a positive attitude toward work, having a positive attitude toward self, being punctual and organizing their students' time, and working with others. The five areas with relatively low importance ratings' means are: performing specific occupational skills, performing basic academic skills, preparing for further education, improving interpersonal and social skills, and being aware of more career opportunities.

TABLE 3.24

RATINGS BY FWS RESOURCES (ROs AND RPs) OF PROGRAM EFFECTIVENESS AND IMPORTANCE OF 15 STUDENT LEARNING AREAS

(N=36)

Item	Effectiveness		Importance	
	Mean	N	Mean	N
Work with others	3.86	22	4.58	31
Be aware of more career opportunities	3.77	22	4.23	31
Have a positive attitude toward learning	3.70	20	4.81	31
Have a positive attitude toward work	3.68	19	4.77	31
Assume responsibility for themselves	3.67	21	4.57	30
Improve interpersonal and social skills	3.58	19	4.16	31
Prepare for further education	3.58	19	4.16	31
Communicate with others in a mature way	3.50	22	4.57	30
Think through and solve problems	3.43	21	4.48	31
Make decisions and follow through	3.43	21	4.48	31
Perform basic academic skills	3.42	18	3.97	30
Have a positive attitude toward self	3.41	22	4.68	31
Evaluate their own work	3.55	17	4.35	31
Perform specific occupational skills	3.23	22	3.77	31
Be punctual and organize their work	3.10	20	4.63	32

Agreement in Effectiveness Ratings Between Parents and Resources

In comparing ratings of parents and resources on effectiveness of the 15 learning areas, several points stand out:

1. for both groups, all 15 areas were rated on the average above the midpoint between "not effective" and "highly effective;"

2. for every area, parent ratings were higher than resource ratings;

3. the two groups agreed on three of the five areas rated most effective: be aware of more career opportunities, have a positive attitude toward work, and assume responsibility for themselves; and

4. the two groups agreed on three of the five areas rated as least effective: perform specific occupational skills, be punctual and organize their work, and perform basic academic skills.

Agreement in Effectiveness Ratings Among Parents, Resources, and Students.

The four items receiving the highest overall rating of effectiveness (by students, parents, and resources) are: be aware of more career opportunities, assume responsibility for themselves, communicate with others in a mature way, and have a positive attitude toward learning. Students rated all these items among the top five in effectiveness; parents and resources rated three of these items among the top five. The four items receiving the lowest overall rating of effectiveness are: perform basic skills, perform specific occupational skills, be punctual and organize their time, and evaluate their own work. Both students and resources rated these items as among the five lowest in effectiveness; parents rated three of these items among the lowest five. Table 3.25 presents a summary of the rankings and mean values of these items.

TABLE 3.25

STUDENT LEARNING AREAS RANKED HIGHEST AND LOWEST IN EFFECTIVENESS

ITEM	Students		Parents		Resources	
	Ranking	Mean	Ranking	Mean	Ranking	Mean
Be aware of more career opportunities	1	4.49	4	4.41	2	3.77
Assume responsibility for themselves	2	4.35	2	4.47	5	3.67
Communicate with others in a mature way	5	4.14	5	4.29	8	3.50
Have a positive attitude toward learning	3	4.22	8	4.15	3	3.70
Perform basic academic skills	15	3.38	15	3.44	11	3.42
Perform specific occupational skills	14	3.67	14	3.75	14	3.23
Be punctual and organize their time	11	3.90	12	3.82	15	3.10
Evaluate their own work	13	3.73	9	4.15	13	3.55

STUDENT OUTCOMES

Self-development

Is the FWS individualized approach able to assist those needing help in self-expression? (Initial Planning Form, SPPS)

During initial diagnosis, students were given a checklist of seven school-related areas in which they could request help. Eleven of the 35 entering students stated that they would like extra help in "expressing myself." At the end of the school year, all students were asked to rate the helpfulness of the seven areas of the program on a 3-point scale. Table 3.26 shows that ten of the 11 students mentioned above rated the program as "very helpful" in improving self-expression; the other student rated the program as "somewhat helpful" in this regard.

TABLE 3.26

DISTRIBUTION OF HELPFULNESS OF FWS FOR THOSE WHO REQUESTED HELP IN VARIOUS AREAS

Area of Needed Help	FWS Entering, Group OBC (N=35)			
	Asked For Help	Program Judgment		
		Not Helpful	Somewhat Helpful	Very Helpful
Reading	5	0	5	0
Writing	7	1	3	3
Mathematics	15	4	9	2
Self-expression	11	0	1	11
Meeting/dealing with people	15	1	2	12
Study habits	13	1	6	6
Health/fitness	6	1	3	2

Did FWS students improve in self-development skills? (SPPS)

To answer this question, FWS and comparison students were asked at the end of the year to indicate their impressions of their school's helpfulness in a variety of self-development areas: self-expression, self-understanding, study habits, and health/fitness. Data are summarized in Tables 3.27 and 3.28; the number of points on the scale for each question is indicated in the tables. These tables present the Kruskal-Wallis H statistics for comparison of the experimental group versus the control group. Descriptive statistics for the FWS entering students and the OPS representative group are also included for corroborative purposes, but H statistics are not presented for this comparison. All the H values have one degree of freedom associated with them, and are distributed as Chi-square variates for comparison of randomized groups. The probability level of the Chi-square value given a true null-hypothesis is also given in the tables. It should be noted, in connection with the tables, that H does not refer directly to the mean differences shown but to the sum of ranks for each group calculated by treating the response categories as falling on an ordinal scale. All responses in a category are considered equivalent.

The data for the first two items in Table 3.27 provide self-report evidence on the school's effectiveness in achieving its goals to further student self-expression and self-understanding.* The evidence supports the hypothesis that FWL-EBCE is effective in achieving its goals of aiding students in learning to understand and express themselves. The results are consistent across all comparisons.

Table 3.28 shows that on the item "health and fitness," the means for the FWS experimental group and the FWS entering group fall toward the "not helpful" end of the scale, along with the control group, whereas the OPS representative group falls toward the "very helpful" end of the scale. The difference shown in the experimental-control comparison is, however, not significant. Where study habits are concerned, the students in the experimental group saw the program as more helpful than those in the control group.

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*Items "get along with others" and "meeting and dealing with others" shown on the table will be discussed under interpersonal skills in the text.

TABLE 3.27

STATISTICS FOR FOUR GROUPS ON SELF-REPORTS OF HELP IN FOUR AREAS

Item		Group			
		FWS Experimental	OPS Control	FWS Entering	OPS Representative
School helped in expressing myself.	Mean	2.58	1.92	2.74	2.17
(3-point scale; 3 = strongly agree)	SD	.51	.79	.45	.72
	N	12	12	34	23
	H*	4.52 .05 > p			
School helped me better understand myself.	Mean	3.00	2.17	3.15	2.63
(4-point scale; 4 = strongly agree)	SD	.74	.58	.74	.88
	N	12	12	34	24
	H*	8.78 .005 > p			
School helped me get along with others.	Mean	3.00	2.09	3.00	2.65
(4-point scale; 4 = strongly agree)	SD	.60	.83	.65	.83
	N	12	11	34	23
	H*	6.52 .025 > p			
School helped me in meeting and dealing with people.	Mean	2.69	2.08	2.77	2.26
(3-point scale; 3 = very helpful)	SD	.48	.90	.49	.62
	N	13	12	35	23
	H*	3.22 .10 > p			

* H is the Kruskal-Wallis test statistic corrected for ties.

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TABLE 3.28

STATISTICS FOR FOUR GROUPS ON SELF-REPORTS OF HELP RECEIVED IN STUDY HABITS AND HEALTH AND FITNESS

Item *(3-Point Scale; 3 = Very Helpful)*		Group			
		FWS Experimental	OPS Control	FWS Entering	OPS Representative
School helped my study habits.	Mean	2.23	1.42	2.14	2.25
	SD	.60	.67	.73	.79
	N	13	12	35	24
	H*	7.91 .005 > p			
School helped my health and fitness.	Mean	1.92	1.75	1.94	2.48
	SD	.67	.87	.69	.68
	N	12	12	34	21
	H*	0.42 p > .10			

* H is the Kruskal-Wallis test statistic corrected for ties.

How have students' attitudes about themselves been affected by school this year? (Student Interview)

In the interview, more FWS students (81%) than control students (57%) felt they had learned something about expressing themselves in the past semester. The statement "I am able to express myself better on a one-to-one basis" was made by some FWS students (19%), but by fewer control students (7%). (See Appendix C.)

Most FWS students (94%) and control students (85%) felt they had learned something more about themselves in the past semester. But the groups differed on the reasons for learning more about themselves: the reason "I had to think on my own" was made by most FWS students (69%), but by only a few control students (25%). The most common reason given by control students (33%) was "I learned to be more responsible," also given by 38% of FWS students (see Appendix C.)

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Have FWS students become more "active learners" as shown by their expressed interests? (SPPS)

A goal of the FWS program is to produce students who are "active learners." Such students, when presented with a list of activities, can be expected to indicate more likes and fewer dislikes in May than they did in September. It is felt that if the program is successful, the students will be more motivated, more enthusiastic about the world around them.

To investigate this question, FWS students were asked to indicate their likes and dislikes for 18 interest areas. For each item they could make one of three choices: like, dislike, or no preference. This question was asked of all students at the start of the school year (pre) and at the end of the school year (post), making it possible to compare changes over time for the Far West School group. For this analysis, only the 35 entering students (Group OBC) were considered.

Table 3.29 shows the changes in the FWS entering group from pre to post. FWS students showed an increased percent in the "like" category for 16 out of the 18 items. On nine items the increase was at least 10%. These activities tend to be ones encouraged by the FWS program. The data indicate that FWS students showed more interest in this group of activities in May than they did in September and that the items on which they showed the most change are related to activities within the FWS program.

Do FWS students see themselves as changing positively as a result of their school experiences? (SPPS)

FWS students and OPS students were asked during post-testing to "name three ways that you have changed as a result of your school experiences." Five major areas of positive change were identified from the responses. The first, and largest, was "self-growth," which encompassed seven different response categories such as "more sure of self" and "more responsible." Other major change areas, "career/work," "learning/academic," "interpersonal," and "future planning," were each subdivided into two response categories. Negative changes and responses of "no change" were also recorded. Three responses were coded for each student where the data were complete. Table 3.30 indicates for the FWS experimental group and the OPS control group the number of changes reported by each student. It can be seen that the groups averaged about two changes per student

TABLE 3.29

CHANGES FROM PRE TO POST IN INTEREST OF FWS ENTERING STUDENTS RANKED BY CHANGES IN "LIKE" CATEGORY (N = 35)

Interest	Category							
	Like			Dislike			No Response	
	Pre %	Post %	Change %	Pre %	Post %	Change %	Pre %	Post %
Playing games	35	61	26	38	18	20	27	21
Doing activities at home	40	63	23	32	15	17	28	22
Reading	60	78	18	27	12	15	13	10
Working alone	41	57	16	31	20	11	28	23
Doing a research project	38	54	16	32	15	17	30	31
Moving around a lot	58	71	13	17	15	02	25	14
Taking things apart	38	49	11	34	31	03	28	20
Deskwork	17	29	11	63	66	03	20	05
Observing	66	76	10	11	12	01	23	12
Taking notes	17	21	04	60	59	01	23	20
Listening	69	72	03	09	14	05	22	14
Selling/persuading	31	34	03	49	40	09	20	26
Working with hands	64	67	03	09	15	06	27	18
Discussing	69	71	02	12	09	03	19	20
Sitting	29	31	02	57	46	11	14	23
Making things	68	69	01	09	17	08	23	14
Interviewing	46	41	-05	37	31	06	17	28
Serving people	35	29	-06	46	47	01	19	24

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TABLE 3.30

NUMBER OF CHANGES MENTIONED BY THE FWS EXPERIMENTAL AND OPS CONTROL GROUPS IN RESPONSE TO THE CHANGE QUESTION

Group	Number of Responses Per Student				Total Responses
	0	1	2	3	
FWS Experimental (N=13)	1	2	4	6	28
OPS Control (N=12)	0	4	4	4	24

Table 3.31 summarizes the changes mentioned by the student groups. Percents used in this table are percents of the total responses for that group. Because students gave varying numbers of responses, the data are not equally representative of all students.

It can be seen from Table 3.31 that the experimental group exceeded the control group in percents for self-growth, career/work, and interpersonal skills while the control group had a higher percentage of responses in the area of learning/academic. All responses listed for the experimental group were positive in tone, while 17% of the control group responses were in the negative/no change category. The data imply that FWS students place more emphasis on self-growth; OPS students see themselves as having made relatively more changes in school attitude and school achievement.

Do FWS students report more significant school-related changes than students at traditional educational institutions? (SPPS)

The "change" question described in the preceding section was analyzed for the quality of the student's total statement. It was felt that there was a noticeable range in the overall significance of the student's statement that was lost when each change was considered separately by content category. To capture this overall quality or "breadth" of the statement each student's response was rated for significance of change.

Significance was determined by use of the following criteria:

1. increased insight into personal, career, or educational growth and development;

TABLE 3.31

SUMMARY OF SCHOOL-RELATED CHANGES MENTIONED BY STUDENTS*

Area of Change	FWS Experimental N=13		OPS Control N=12		FWS Entering N=35		OPS Representative N=24	
	f	%	f	%	f	%	f	%
Self-growth	12	43	6	25	31	41	18	33
Career/work	3	11	0	0	10	13	1	2
Learning/academic	3	11	7	29	11	14	15	28
Interpersonal	9	32	5	21	16	21	12	22
Future planning	1	4	2	8	5	6	3	6
Total negative/ no change	0	0	4	17	3	4	5	9
TOTAL	28	100	24	100	76	100	54	100

* Students listed from one to three "changes," so frequencies are greater than N. Percents represent percent of total changes of each group.

2. increased planning for the future; and

3. breadth and richness of statement, i.e., the extent to which the statement covers broad areas of change--either in terms of number of different areas mentioned (career, education, personal growth) or the importance of the changes mentioned within these areas.

Taking the above criteria into consideration, each response was rated "in the blind" using the following scale:

1 = No change, or negative change
2 = Little change
3 = Some significant change
4 = Significant change
5 = Very significant change

An analysis of the coding procedures and the interrater reliability is included in Appendix C. The actual responses given by FWS and OPS students, arranged by rating levels, are also included in Appendix C.

Table 3.32 shows the distribution of responses on the significance of change rating. Table 3.33 indicates that there is no significant difference between the experimental and control groups on this measure, although the mean for the experimental group is higher. Examination of these tables plus the groups of actual responses in Appendix C shows that students in the traditional educational setting are more likely to see the ways they have changed as related to getting along better in the school setting, adjusting to the demands of the traditional school in terms of mastering curriculum, entering into social and extracurricular events, and showing socially approved behavior. Although FWS students also mention these topics, they are more concerned with inner growth, getting along with a variety of people, and extending the boundaries of their interests and knowledge.

TABLE 3.32

DISTRIBUTION OF SCHOOL-RELATED CHANGES MENTIONED BY FWS AND OPS GROUPS

Significance of Change	Rating	FWS Experimental N=13 %	OPS Control N=12 %	FWS Entering N=35 %	OPS Representative N=24 %
No change or negative change	1	0	25	9	9
Little change	2	31	33	20	48
Some significant change	3	31	33	23	13
Significant change	4	0	0	17	17
Very significant change	5	31	8	26	9
No response	-	8	0	6	4

TABLE 3.33

STATISTICS FOR FOUR GROUPS ON THE SIGNIFICANCE-OF-CHANGE RATING

Significance of Change	FWS Experimental	OPS Control	FWS Entering	OPS Representative
Mean	3.33	2.33	3.33	2.74
SD	1.30	1.15	1.34	1.18
N	12	12	33	23
H*	3.27 $p > .10$			

* H is the Kruskal-Wallis test statistic corrected for ties.

It can of course be assumed that the FWS students are well aware of the differences in goals and objectives of the FWS program as compared to a regular high school. To a certain extent their responses may reflect what they see as important in the program rather than representing an independent estimate of change. In this event, the program appears to have been very successful in imparting to the students a new and different set of standards for judging their school-related growth.

Do students' LCs see them as changing positively as a result of their school experiences? (Student Change Scales)

The content analysis of student responses to the SPPS "change" question was discussed in the sections above. From this analysis were derived 14 categories in which the students perceived themselves as changing. Each learning coordinator was asked to rate the degree of change he perceived in his students on each of these 14 categories. The alternatives for ratings were "negative," "none," "little," "some," and "much," with an option of "no judgment."

The ratings were assigned scoring values of 1 through 5 (1 = "negative"). Intercorrelations of ratings in the 14 areas were very high: students perceived by LCs as changing in one category were perceived as changing over the others (i.e., there appears to be a halo effect).

The categories were ranked on the basis of mean ratings for FWS entering students (N=35). Ranks, means, and standard deviations for each category are given in Table 3.34. Only two category means were below 4.0 (the value of

TABLE 3.34

STUDENT CHANGE SCALES RANKS AND DESCRIPTIVE STATISTICS BASED ON LC RATINGS OF FWS ENTERING STUDENTS

Change Category	N	Rank	Mean	Standard Deviation
Self-confidence	34	1	4.53	.70
Amount and depth of contact with adults	35	2	4.46	.73
Attitudes and interest in current school and learning	35	3	4.43	.84
Maturity	35	4	4.40	.76
Self-knowledge/understanding	35	6	4.31	.75
Ability to relate to others; capability for self-expression	35	6	4.31	.82
Independence	35	6	4.31	.85
Motivation	35	8	4.26	.77
Responsibility	35	9	4.20	.89
Knowledge about specific careers/jobs/behaviors	35	10	4.06	.71
Ability to solve problems, to make decisions, to cope, to plan	35	11	4.03	.91
Knowledge of and attitudes about careers/world of work (general)	35	12	4.00	.79
Development of future goals and plans	35	13	3.94	.92
Academic knowledge (specific and general)	32	14	3.81	.92

"some" positive change); the lower of these two was 3.81. This implies that the LCs saw the group of students as changing positively in all areas. It must be recognized that the LCs' ratings are probably inherently biased because of their direct and heavy involvement with students.

Interpersonal Skills

Does the FWS individualized approach assist those asking for help in developing interpersonal skills? (Initial Planning Form, SPPS)

At the time of entry into the school, many students felt a need for help in the interpersonal area. Fifteen out of the 35 entering students indicated during initial diagnosis that they would "like to have some extra help" in "meeting and dealing with people." At the end of the school year, all students were presented with a list of program areas and asked to rate on a 3-point scale how helpful the program had been to them. Table 3.26, page 83 shows that of the 15 students who had requested help in the interpersonal area, 12 felt that the program had been "very helpful," while two said that it was "somewhat helpful," and one felt that it had not been helpful.

Is FWL-EBCE effective in furthering the interpersonal skills of students? (SPPS)

The last two items of Table 3.27, page 85 , provide self-report data on this question. The statistical results indicate that FWS students see their program as more effective than regular school programs in developing interpersonal skills.

How have students' attitudes about their relationships with adults been affected? (Student Interview)

More FWS students (75%) than control students (57%) felt they had learned something about getting along with people in the past semester. More FWS students (44%) than control students (14%) felt, "I can meet people more easily now." Two FWS students (12%) mentioned they can get along with adults better now, but no control student did. (See Appendix C.)

All students were asked whether they were treated as adults and about some specific relationships with adults: "Can you speak up?" "Are you being listened to?" "Are you free to ask questions?" "Are you expected to be responsible?" "Are you being talked down to?" Somewhat more FWS students (94%) than control students (71%) felt they were treated as adults. The statement "sometimes they don't listen" was made by a few FWS students (19%) and control students (14%). (See Appendix C.)

Nearly all students felt that they could speak up and that they were expected to be responsible. FWS students and all but two control students felt they were being listened to and were free to ask questions. There were some differences between the groups in attitudes about being talked down to: no FWS students felt they were being talked down to, but some control students (21%) did. (See Appendix C.)

How did the professional interviewers relate to the FWS and control students? (Student Interview)

The professionals conducting student interviews were asked to give their impressions of each of the FWS and OPS students interviewed. Interviewers were instructed to judge how well a student handled himself in the interview situation and to make any judgments they thought relevant about his behavior. Several things should be kept in mind when evaluating these judgment data. Although the interviewers were experienced in the interview situation, they were not trained observers of human behavior. They used their own references in making their judgments. Interviewers did know whether or not the student being interviewed was enrolled at FWS. However, the interviewers' statements were analyzed without reference to the group the student belonged to and the overall rating was made from the interviewer statements about the student; the rating was not an overt judgment on the part of the interviewer.

Table 3.35 shows the results of the interviewer judgments of the students. An outside contractor analyzed the written judgments of the interviewers. Four dimensions were identified from the statements: openness, confidence, skill in expressing himself, and maturity of the student. Note that the interviewer did not always make a judgment that could be classified on each dimension. In addition, the interviewer statements were rated to determine whether the interviewer viewed her relationship with the student as clearly positive, clearly negative, or both positive and negative.

The interviewers judged the FWS students to exhibit more confidence, to be better in expressing themselves, and to be more mature than the control students. Overall, the interviewers' judgments were more "clearly positive" toward FWS students (56%) than control students (29%). These statements should be tempered by the recognition that these could be chance differences.

TABLE 3.35

INTERVIEWER JUDGMENTS OF STUDENTS

Interviewer Judgment	Experimental N = 16		Control N = 14	
	f	%	f	%
Open	9	56	8	57
Reserved	7	44	6	43
Neutral	0	0	0	0
Confident	8	50	4	29
Unsure	5	31	9	65
Neutral	3	19	1	7
Good self-expression	9	56	5	36
Poor self-expression	3	19	2	14
Neutral	4	25	7	50
Mature	9	56	5	36
Immature	4	25	2	14
Neutral	3	19	7	50
Clearly positive interview relationship	9	56	4	29
Clearly negative interview relationship	5	31	5	36
Both positive and negative interview relationship	2	13	5	36

Basic Skills

Does the FWS individualized approach assist students asking for help in basic skills? (Initial Planning Form, SPPS)

Table 3.26, page 83 shows the number of students who indicated during the diagnostic period that they would like to have extra help in the basic skills area. Twelve students asked for help in either reading or writing. At the end of the school year, all but one felt that the program had been at least somewhat helpful.

A number of entering students felt the need for extra help in mathematics; 15 out of 35 entering students requested help in this area. At the end of the school year, nine of these students who requested help felt the program had been somewhat helpful to them, while two felt it had been very helpful. However, four students out of the group requesting help felt at the end of the year that the program had not been helpful.

How helpful do FWS students consider the basic skills area of the program? (Student Interview, SPPS)

During the student interview a higher proportion of control students (64%) than FWS students (44%) expressed positive feelings about their writing skills. The statement "I can write well" was made more by control students (36%) than by FWS students (12%). A positive change over the past semester in writing skills was observed by more FWS students (38%) than control students (14%). The statement "school has not helped me in writing" was made by more control students (42%) than FWS students (19%). (See Appendix C.)

Most FWS students (88%) and control students (93%) had positive attitudes about their reading skills. The statement "like to read" was made by more FWS students (62%) than control students (43%). A positive change over the past semester in reading skills was observed by 19% of FWS students and 7% of control students. The statement "school has not helped in reading" was made by some control students (50%) and FWS students (44%). (See Appendix C.)

Relatively few positive attitudes about their math skills were expressed by either group: FWS students (12%) and control students (29%). The statement "don't like math" was made by some control students (43%) and FWS students (31%). "No change" over the past semester in their math skills was observed by approximately equal numbers of FWS students (69%) and control students (64%).

The statement "school has not helped at all in my math" was made more often by control students (57%) than by FWS students (38%). (See Appendix C.)

In the Student Plans and Perceptions Summary, students were asked to rate the helpfulness of seven school areas. The questions and analysis procedures have been described previously on page 84 . Data related to basic skills are reported in Table 3.36.

The data in Table 3.36 indicate that experimental and control groups rated the helpfulness of their programs about the same. The one statistical difference (mathematics) suggests a superiority for FWS.

TABLE 3.36

STATISTICS FOR FOUR GROUPS ON SELF-REPORTS OF HELP IN BASIC SKILLS

Item *(3-Point Scale; 3 = Very Helpful)*		Group			
		FWS Experimental	OPS Control	FWS Entering	OPS Representative
School helped me in reading.	Mean	2.17	1.92	2.26	2.21
	SD	.72	.79	.62	.66
	N	12	12	34	24
	H*	0.65 p >.10			
School helped me in writing.	Mean	2.31	2.25	2.53	2.48
	SD	.75	.87	.61	.73
	N	13	12	34	23
	H*	0.01 p >.10			
School helped me in math.	Mean	2.00	1.33	1.83	2.13
	SD	.82	.65	.75	.85
	N	13	12	35	24
	H*	4.62 .05 > p >.025			

* H is the Kruskal-Wallis test statistic corrected for ties.

What were the results of the pre/post administration of the Iowa Tests of Educational Development to FWS experimental and OPS control groups?

The Iowa Tests of Educational Development (ITED) were administered to FWS students and the OPS control group students in November and May. They were also administered to the OPS representative group in May.* Grade equivalent scores were used in the analysis of data presented in this section. The problems inherent in the use of such scores are well documented.** Nevertheless, grade equivalent scores are used here because of the familiarity of many readers with such scores, and because of their apparent simplicity of interpretation.

Statistics for data obtained at the year-end (May) testing for each of the three groups are presented in Table 3.37. These descriptive statistics show that all three groups obtained scores that are below the average for the national normative sample used to derive the grade equivalent scores for this test. The statistics also demonstrate that overall, the FWS student group that took the test is more like the comparison group than the control group. The most important information that can be obtained from the table is the evidence of various kinds of explicit or implicit selection that has taken place for the three groups. For example, the proportion of grade level to group members varies widely; the erratic progression of the mean scores across grades also illustrates the effects of selection.

The problems posed by the effects of differential selection were such that only two kinds of comparisons seemed likely to be meaningful. The first is the comparison of the FWS students with the national norms sample data as reflected by mean grade-equivalent scores. The second is the comparison of the subgroup of FWS students (Group C) for which there was a randomly selected control group.

Data presented in Appendix C can be used as a basis for comparison of FWS students with the national norms sample. These data can also be useful

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*The tests could not be administered to the OPS Representative Group in November because of Oakland Public Schools administrative considerations.

**Angoff, W. H. "Scales, Norm, and Equivalent Scores." In R. L. Thorndike (ed.), Educational Measurement, 2nd edition. Washington: American Council on Education, 1972, pages 523-525.

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TABLE 3.37

STATISTICS FOR ITED YEAR-END GRADE EQUIVALENT SCORES
OBTAINED BY STUDENTS GROUPED BY GRADE IN SCHOOL

ITED Test	Grade 10			Grade 11			Grade 12		
	FWS Students	Control Students	Comparison Students	FWS Students	Control Students	Comparison Students	FWS Students	Control Students	Comparison Students
Language									
N	14	3	10	11	5	12	21	4	2
Mean	8.22	9.90	8.35	9.91	11.06	9.82	10.78	9.33	12.10
SD	2.27	2.45	2.32	2.23	.88	2.25	1.86	2.13	.71
Math									
N	14	3	10	11	5	12	21	4	2
Mean	9.31	9.37	8.98	10.57	9.26	9.26	10.45	8.85	11.75
SD	1.33	2.34	1.37	1.64	2.36	2.01	1.76	1.87	.64
Reading									
N	14	3	10	11	5	12	20	4	2
Mean	9.08	10.10	9.42	11.05	10.18	10.21	11.03	11.15	11.65
SD	1.85	3.14	2.64	1.91	2.85	2.37	2.17	1.24	.35

as a description of the heterogeneity of the FWS student group. In reviewing these data, it should be remembered that at the time of midyear testing, students were variously in grades 10.4, 11.4, and 12.4 respectively; at the end of the year they would have been considered to be at approximately grades 10.9, 11.9, and 12.9.

In November, the FWS students were on the average below the mean for the national norms sample by nearly one grade point in language, about two points in math, and between one and two grade points in reading. At the end of the year the difference between the average scores for the FWS students and the national norms sample are of about the same magnitude except for the language test, where the differences have increased to about 2.5 grade points. The consistency of this increase in language-score deficit across grades suggests that the deficit may result primarily from the assumption of linear growth in the average scores of the normative sample. The data in these tables also illustrate very well the heterogeneity of FWS students. Generally, the observed range of grade scores is from five to seven grade points for any of the three tests at any of the three grades. This heterogeneity underscores the need for an individualized or personalized approach to the remediation of skill deficits.

A meaningful assessment of the effects of the FWS experience on change in ITED socres must, of course, be based on an analysis using data obtained from comparable groups of students who did and did not have such experience. Analyses of covariance of the ITED math and reading scores for the experimental (Group C) and control (Group D) groups were completed, using the May scores as the criterion measure and the November scores as the predictor. The means and standard deviations for these groups are presented in Table 3.38.

Table 3.38 shows that the experimental group had a greater average change on the math test than did the control group, but the analysis of covariance indicated that the difference is not significant. On the reading test, the control group changed more than did the experimental group. In the analysis of covariance, the errors of estimate for the two groups were significantly different at the .01 level, and the regressions of the May scores on the November scores were significantly different at the .10 level. Thus, there is no accurate test of the significance of the difference in means. It seems clear that the two groups do differ in a number of ways with respect

TABLE 3.38

STATISTICS ON ITED MATH AND READING SCORES FOR FWS EXPERIMENTAL AND OPS CONTROL GROUPS

Statistics	Math				Reading			
	FWS Experimental N=12		OPS Control N=10		FWS Experimental N=12		OPS Control N=10	
	Nov.	May	Nov.	May	Nov.	May	Nov.	May
Mean	9.4	10.1	8.9	9.1	10.0	10.4	8.8	10.2
Standard deviation	1.8	1.4	1.8	2.0	2.6	2.3	3.4	2.5
Correlation	.64		.74		.92		.48	

to change in the reading scores. There was, however, one student in the control group who showed a gain of 7.2 grade equivalent points in reading from the beginning to the end of the year, which is an extremely large increase for one year, even allowing for errors of measurement. If this pair of scores had been omitted from the analysis, the increase in the average reading score of the control group would have been only 0.8 instead of 1.4. There is no information about this student, or about the testing conditions, that would justify omission of her scores, but this dramatic change in the means that can result from the inclusion or exclusion of a single student does illustrate the effect of extreme scores when only small samples yielding skewed distributions are available.

In summary, the FWS students and students from the Oakland Public Schools who are in the control and comparison groups are on the average appreciably below the national norms in the ITED measures. There is no evidence of any meaningful or reliable difference between FWS and control group students in the rate at which they develop in math. The results of the reading test show that the groups differ in a number of ways, but these differences may be largely attributable to the effect of one atypical student in the control group.

Did FWS students progress in written communication skills?

Because effective communication is so important in career development, a sample of written communication was obtained from all Far West School students at the beginning and end of the school year. For the pretest, students were asked to write on a topic of interest; five possible topics were offered for students who could not quickly think of one. For the posttest, each student was assigned one of four topics, the assignments being made to assure that a given student would be writing on a topic similar to what he chose for the pretest. Students were given approximately 20 minutes to write the essays; only a few of the essays exceeded in length the equivalent of one page of double-spaced typing. Thirty-four of the students completed the writing sample exercise before and after the school year. The discussion below is based on data from these students.

In preparation for the task of judging the quality of the samples, each written essay was typed in exactly the form written; i.e., with all of the errors, paragraphing, and so on, as written by students. A random identification number was assigned to each paper so that those reading the essay would not know whether they had been written at the beginning or end of the school year. Four readers were chosen from a pool of experienced readers who had graded essays in large-scale external testing programs; all were members of English department faculties at their respective institutions.

The decision was made that every essay would be read and graded by all four readers, and that the score for an essay would be the average of the four ratings. The order in which the papers were read varied for each reader so a particular paper would be read at different times during the day. It was decided that the essays should be judged by the readers with respect to three characteristics: mechanics of writing, effectiveness of communication, and maturity or logical thoughtfulness. The choice of these three characteristics was based on consideration of program objectives, discussions with learning coordinators of their day-to-day perceptions of student communication characteristics, and a quick, holistic reading of all of the essays by one staff member.

When the essay readers assembled, they were given a draft definition of each of the three characteristics, presented in terms of qualitative descriptions of several levels of written essays that might be found by them in their reading. The readers were then each given the same five essays written by five students and asked to rate the papers on the basis of the draft definitions. After reading these essays, the readers reassembled to review and discuss their ratings and to arrive at a final definition of the characteristics and rating scales they would use. In this process, they defined an additional point on each of the first two characteristics, and extended a few of the definitions in order to relate student performance to adequacy for daily use and amount of additional instruction necessary to improve the student's writing skills. The final definition of the three rating scales are presented below.

Writing Sample Rating Scales Definition

Mechanics of Writing

Rating 5. Virtually flawless writing that would be considered distinguished for a high school student. The student does not need any particular help to improve his writing skills.

Rating 4. A number of mechanical errors, which may result from carelessness more than a lack of skills. The writing would be considered generally satisfactory for most purposes of daily life in business or other communication needs. The student could profit from having someone go over the paper with him and draw his attention to the errors, but probably would need little additional training to improve his writing skills.

Rating 3. The writing is reasonably good, and the errors are not so serious as to interfere with comprehension on the part of the reader. The student does need more instruction or training in composition, and in some instances might need as much as the equivalent of one more semester course in composition.

Rating 2. There is a clear impression that some major aspect of composition has not been learned by the student. The errors are serious enough to interfere with comprehension on the part of the reader. The student needs specialized help that might be obtained through small-group instruction, with a little individualized assistance from a teacher.

Rating 1. The errors are so serious and frequent that comprehension by the reader is nearly impossible. There is probably no situation for which this level of writing would be considered adequate. Improvement of writing skills would require a completely individualized approach to remediation.

Effectiveness of Communication

Rating 4. Sequentially stated ideas have a relation to each other; if there is a shift from one topic to another, there is consistency within topics. The sample includes an introduction or premise, a set of considerations or arguments, and a conclusion.

Rating 3. The purpose of the writing is clear, and the message gets across, but there is some lack of coherence that interferes with the overall effectiveness of communication.

Rating 2. There is some indication of relation of different ideas, but not necessarily in sequential order. The sample is little more than a collection of related ideas or thoughts.

Rating 1. This is a collection of nearly unrelated ideas, connected at best by some common words. When a reader is done, he does not have any idea of what the writer wanted to say, and many of the ideas may not even be related to the topic chosen.

Maturity or Thoughtfulness

Rating 3. The writer shows evidence of having thought about the topic, cites some previous experience that is relevant to the topic, and shows that he has drawn some conclusion from the experience.

Rating 2. There is some evidence that the writer has drawn on his own knowledge and experience in a way that is relevant to his ideas.

Rating 1. There is virtually no evidence of thought about the topic, and no reference to experience; the writing may also contain several very improbable ideas or expectations.

In considering the definitions of the three characteristics, the readers expressed uncertainty about whether they could rate the essays for the third characteristic independent of the second. After hearing a brief explanation of the rationale for thinking that experience-based education might lead to differential rates of development of the two characteristics, the readers agreed to try to distinguish the two. They devoted time to clarification in terms that might make it possible to distinguish the two characteristics.

Estimated Reliability

As noted above, each of the four readers rated every essay, and they could not know whether they were rating a pre- or post-test or how essays could be matched for a given student. Thus for purposes of estimating the reliability of the ratings assigned for a given characteristic, there were eight ratings for a particular student (four raters for pre-test scores and four for post-test scores). This yielded six interrater correlation coefficients for the pre-test and six for the post-test. The distributions of the 12 interrater correlations and the median correlation coefficients for each score are presented in Table 3.39. Since the score to be used for further analysis is the average of the four ratings for a given score, the estimate

TABLE 3.39

DISTRIBUTIONS OF INTERRATER CORRELATIONS FOR
THREE SCORES ON THE WRITING SAMPLES
(N=34)

Correlation Coefficients	Mechanics of Writing	Effectiveness of Expression	Logical Thoughtfulness
.70 - .79	3		
.60 - .69	5	3	
.50 - .59	4	5	2
.40 - .49		4	3
.30 - .39			3
.20 - .29			0
.10 - .19			3
.00 - .09			1
Number of correlations	12	12	12
Median *	.61	.53	.34
Estimated reliability for average ratings (Spearman Brown)	.86	.82	.67

* These medians were calculated from distribution with finer grouping than that used here.

of the reader reliability for these average scores was obtained by applying the Spearman-Brown Prophecy Formula to the median correlation coefficients. These values are also shown in Table 3.39. It can be seen from this table that the estimated reader reliability of the average ratings for each student on each of the three scales is quite high--certainly high enough for use in assessment of program effects--with the possible exception of the third scale, Logical Thoughtfulness.

The estimation of the reliability of essay tests, as distinguished from reader reliability, is a difficult and expensive task. It is even more difficult to obtain estimates of the reliability of several scores derived from the same essay, as in this instance, because of possible problems of halo effect, the possible minor variations in standards of the reader over time and among readers, and so on. In the present instance, the small number of students for whom data were available and the magnitude of the total program evaluation effort that was undertaken, meant that the estimation of score reliability had to be limited to obtaining upper and lower limits for such reliabilities.

The intercorrelations among the six average scores for each of the students were used to obtain a rough approximation of the lower limit of the reliability of these average scores as indicators of student skills, and were also used as a basis for examining the question of the experimental dependence of the second and third scales. (These intercorrelations and appropriate means and standard deviations are presented in Table 3.40.)

Clearly, the estimated reader reliability represented the upper limit, although it is undoubtedly an overestimate of the score reliability. The lower limit of the score reliability was determined in this case by the use of the highest correlation between any two scores that wer obtained from different samples of writing. For the Mechanics and Effectiveness scores, the correlation between the pre- and post-measures of these characteristics was used as the best estimate of the lower limit; for the Thoughtfulness score, the correlation between the pretest measure of this characteristic and the posttest measure of Mechanics was used as the lower limit.

If the procedures used for establishing limits for score reliability estimates are accepted, the limits shown in Table 3.40 indicate that the Mechanics and Effectiveness scores are sufficiently reliable for use in program evaluation; the reliability of the Thoughtfulness score may be on the borderline for such use. Since there are no data available from a better measure of the important characteristic defined by the Thoughtfulness score, the score was judged to be of sufficient usefulness to merit further analysis for this program evaluation effort.

TABLE 3.40

INTERCORRELATIONS AMONG AVERAGE OF FOUR RATINGS FOR EACH STUDENT (N=34)

Rating		Mechanics of Writing		Effectiveness of Expression		Logical Thoughtfulness	
		Pre	Post	Pre	Post	Pre	Post
Mechanics:	Pre	--	.71	.80	.56	.55	.43
	Post		--	.60	.74	.59	.63
Effectiveness:	Pre			--	.60	.72	.45
	Post				--	.54	.80
Thoughtfulness:	Pre					--	.37
	Post						--
Mean		2.31	2.83	2.09	2.48	1.75	2.07
Standard deviation		0.76	0.84	0.59	0.66	0.43	0.51
Estimated rater reliability		.86		.82		.68	
Estimated lower-limit test reliability		.71		.60		.59	

The only question that can be answered by an analysis of the scores from this exercise is whether or not written communications skills, as defined by the scales described above, increased for an appreciable number of students over the course of the year they were enrolled in Far West School. A conventional procedure for answering this question is that of comparing the pre- and post-test mean scores relative to the standard errors of the differences between means. It seemed possibly more meaningful, however, to analyze the data in terms of the number and percent of students who increased their skills by some given amount. This approach, of course, requires the establishment of some criterion for the determination of an increase. Such a criterion was established based on two kinds of considerations: the amount of individual change that would be required so that one could be confident that the observed change was greater than could be attributed simply to the unreliability of the pre- and post-scores, and the magnitude of change that might be required to have some meaning educationally and for career preparation.

The first consideration was approached by choosing a reasonable single figure as an estimate of the reliability, so that the standard errors of individual scores and of the differences between two scores obtained by an individual could be calculated. As discussed above, upper and lower limits for the test reliability had been obtained. In the absence of additional data, it seemed reasonable to use a value somewhere near the midpoint of this range as a working estimate of the score reliabilities. The values chosen for the estimated score reliabilities, standard errors of measurement, and standard errors of the differences between individual scores are shown in Table 3.41.

TABLE 3.41

RATING STATISTICS FOR WRITING SAMPLE

Statistic	Mechanics of Writing	Effectiveness of Expression	Logical Thoughtfulness
Reliability	.75	.70	.65
Standard error	.40	.35	.30
Standard error of difference	.55	.50	.45

The second consideration mentioned above, that of educational meaningfulness, was approached by considering the score definitions. Since they were stated in terms of both quality of the writing and the effort needed to improve skills, it seemed appropriate to conclude that an increase of half a point or more is sufficiently large to be meaningful to the students. Since this half-point difference is approximately equal to the estimated standard error of the difference between individual scores on each of the three scales, the decision was made that an increase of one half-point or more in the average rating increment would be accepted as indicative of a real improvement in writing skills.

Pre- and Post-Test Differences

The distributions of the differences in individual scores on the pre- and post-tests presented in Table 3.42 show that percent of students whose written communication scores increased by more than one standard error of the difference is much higher than would be expected (16%) than if there were no increase for the group as a whole. Approximately 55% of the students showed a significant increase in Mechanics and in Effectiveness, and none of them showed a significant loss in these skills. A smaller percentage (41%) showed a significant increase in Thoughtfulness, and two students showed a significant loss.

TABLE 3.42

DISTRIBUTIONS OF DIFFERENCES BETWEEN PRE AND POST WRITING SAMPLE SCORES

Differences*	Mechanics of Writing		Effectiveness of Expression		Logical Thoughtfulness	
	f	%	f	%	f	%
1.50 and higher	4	12				
1.00 - 1.49	4	12	7	21	5	15
0.50 - 0.99	11	32	12	34	9	26
0.00 - 0.49	11	32	8	24	13	38
-0.50 - -0.01	4	12	7	21	5	15
-1.00 - -0.51	0				2	6
Total	34		34		34	
Maximum possible difference	4.00		3.00		2.00	
t % above 1.00		6.35		6.19		3.97
p		<.001		<.001		<.001

* The interval size is equal to the standard error of the difference between individual scores.

The t-test results shown at the bottom of Table 3.42 represent a test of the difference between the percentage showing a significant increase and the expected value of 16% that would occur by chance. These three tests demonstrate that Far West School students as a group did increase their skills as measured by the Writing Sample during the 1973-74 school year. Inspection of the differences broken down in subgroups of FWS students did not suggest any noticeable differences from one group of students to another.

In summary, a large proportion of Far West School students showed increases in their writing skills that were both statistically and educationally significant. Writing samples were not available for a control group of students, so it is not possible to attribute these increases specifically to the FWS experiences.

Career Awareness and Planning

Do FWS students feel the program is helping them to prepare for the future? (SPPS)

The comparison of experimental and control groups on the self-report data shown in Table 3.43 supports the hypothesis that FWS is effective in preparing students for work and helping them to make post-high school plans.

How have students changed in their statements of short-term and long-term plans? (SPPS)

FWS and OPS students were asked, at the beginning and end of the school year, what they expected to be doing one year after completing high school. The original format called for the student to check one of ten responses. Some students checked more than one response; in this case the multiple response was reduced to a single response by use of a coding scheme which favored (1) academic over vocational or work (on the basis that many young people are primarily students but must also work), and (2) full-time over part-time work. The original coding scheme will be found in the SPPS procedures and coding manual located in Appendix C, along with the original question.

The ten original response categories were combined into four to produce Table 3.44, which shows the change from pre to post-test for the experimental and control groups, for FWS entering students, and for the OPS representative group. Table 3.44 indicates the extent to which members of each group tend to give a response in the same area for both pre- and post-test. Grouping of

TABLE 3.43

STATISTICS FOR FOUR GROUPS ON SELF-REPORTS OF HELP IN PREPARATION FOR THE FUTURE

Item *(4-Point Scale; 4 = Strongly Agree)*	Group			
	FWS Experimental	OPS Control	FWS Entering	OPS Representative
School helped prepare me for work.				
Mean	3.15	2.25	3.29	2.33
SD	.55	.87	.57	.87
N	13	12	35	24
H*	7.20 .01 > p			
School helped prepare me for college.				
Mean	3.17	2.58	3.03	2.91
SD	.58	.67	.63	.60
N	12	12	34	23
H*	4.44 .05 > p			
School helped me decide post high school plans.				
Mean	3.25	1.67	3.24	2.42
SD	.62	.49	.55	.83
N	12	12	34	24
H*	16.85 .005 > p			

* H is the Kruskal-Wallis test statistic corrected for ties.

TABLE 3.44

MATRICES OF STATED POST-SECONDARY PLANS OF STUDENTS

PRE-TEST CHOICE	FWS Experimental Group					OPS Control Group				
	Post-Test Choice					Post-test Choice				
	Voc. Trng.	Work	Acad. Educ.	Other	Total	Voc. Trng.	Work	Acad. Educ.	Other	Total
Vocational Training	2	1	3	0	6	0	2	0	0	2
Work	0	0	0	1	1	0	3	0	1	4
Academic Education	0	0	3	1	4	2	0	2	0	4
Other	1	0	0	1	2	0	0	0	2	2
TOTAL	3	1	6	3	13	2	5	2	3	12

Pre-Test Choice	FWS Entering Group					OPS Representative Group				
	Post-Test Choice					Post-Test Choice				
	Voc. Trng.	Work	Acad. Educ.	Other	Total	Voc. Trng.	Work	Acad. Educ.	Other	Total
Vocational Training	3	3	6	0	12	2	0	0	0	2
Work	0	2	1	3	6	1	2	0	0	3
Academic Education	0	1	9	2	12	3	2	12	0	17
Other	2	0	1	2	5	0	0	0	0	0
TOTAL	5	6	17	7	35	6	4	12	0	22

responses along the diagonal indicates a low amount of change, while a scattered pattern shows shifts from pre- to post-test.

From Table 3.44 it is evident that there is less change, i.e., less movement away from the diagonal, for the OPS groups. For the OPS representative group, 16 out of 22 students gave responses in the same area for pre- and post-test. In contrast, only 16 out of the 35 FWS entering group (less than half) gave a similar response on the pre- and post-test. This group also showed a much wider scatter throughout the 4 by 4 table (the post marginals indicate a spread over all four areas), while the OPS representative group made no use of the "other" category which allowed students to specify unique plans for the future.

The OPS representative group showed a reduction in the number of students who were planning a college education; those students lost from that group intended either to have vocational training or to go to work. In contrast, the FWS entering group gained in the number of students planning a college education, picking up a number from the vocational category, which was not popular with this group in the post-test ratings.

Another question on the SPPS asked students about their long-range plans--what they expected to be doing in five years. This question was open-ended and was originally coded into 14 categories. The categories were reduced to four areas for presentation in Table 3.45. A comparison of the experimental and control groups shows two unique patterns. The control group sees itself as working at an identifiable type of job in five years, probably of a non-professional nature. In contrast, the experimental group has made a dramatic increase in plans which involve continued school in five years and has reduced the number of specific jobs that it can identify in its future plans. The experimental group is more inclined (Post) to say they "don't know" what they will be doing in five years. The two patterns identified above are also evident for FWS entering students and OPS representative students.

In summary, it appears that FWS students show more variability in reporting their future plans than do OPS comparison students. FWS students are more inclined to change their plans and to consider a wider variety of options. They are increasingly interested in furthering their education and less interested in vocational training. It appears that Far West School has been successful in encouraging students to "keep their options open," to

TABLE 3.45

LONG-TERM PLANS: PRE AND POST

Expected Activity Five Years After High School	FWS Experimental N=13		OPS Control N=12		FWS Entering N=35		OPS Representative N=22	
	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %
Work (unspecified job)	23	15	25	17	31	26	36	29
Work (specific non-professional job)	23	8	17	49	20	9	18	25
Work (professional job)	23	8	0	17	11	6	18	13
In college or working for higher degree	15	62	17	17	6	40	23	25
Uncertain; can't say*	16	7	25	0	32	19	5	8

*One student in the FWS Entering Group (Pre) planned to be "retired" in five years.

learn about a variety of careers, and to be more realistic about the educational demands of many professions. It is also evident that FWS has a significant influence on increasing the proportion of students whose plans include further education.

What was the level of students' post-secondary planning? (Student Interview)

Both the FWS and the control students were asked what plans they had made for after high school. Somewhat more FWS students (81%) than control students (64%) had made plans to go to college. More control students (21%) than FWS students (6%) had made no plans at all for after school. (See Appendix C.)

How helpful did students judge the school program to be in making post-high school plans? (Student Interview)

More students judged the FWS program to be helpful in making post-high school plans (88%) than control students (50%) did in judging the helpfulness of their school programs. Some control students (43%) said their school was not helpful; no FWS student said this. The FWS program was preceived to give the student direction for his future by more students (38%) than control students' (none) perceptions of their school programs. The school program was judged to be "not relevant to the student's future" by more control students (36%) than FWS students (none). (See Appendix C.)

What information sources were helpful to students in making decisions about their future? (Student Interview)

Most FWS students (75%) and control students (86%) had made decisions about their future. Student groups differed in their sources of information to help them make decisions: many more FWS students (52%) than control students (7%) talked with people in their fields of interest about their possible future. Some control students (21%) and some FWS students (19%) got help in making decisions from an advisor or learning coordinator. (See Appendix C.)

How do students feel about work and jobs? (Student Questionnaire)

The students were very positive in looking forward to having jobs and to having a choice of occupations; they believed that hard work could have an effect on achievement. They were appreciably less positive when asked if they felt most people receive satisfaction from their work, and are about evenly divided in their opinion of whether people work just to earn money or for other reasons.

The data from which these student characterizations were derived are presented in Table 3.3, page 46, which shows the questions, the frequencies in each of the three response groups, and the t-test value.

Do FWS students consider increased career awareness an important outcome? (SPPS)

Each Far West School student was asked to rate on a five point rating scale 26 aspects of the Far West School program on the basis of the success of these program elements for this student. A complete discussion of this rating scale will be found in Chapter 4. FWS entering students rated "Learning About Careers" as the second most successful element in the program, exceeded only by "Learning Coordinators." "Future Career Planning" was seventh in rank for this group with a mean rating of 4.09 on a five point scale.

Have the attitudes of FWS students changed toward the world of work as a result of experience in EBCE? (Job-Related Attitude Scales)

It was expected that the FWS experience might result in a change in the attitudes of students toward the world of work, especially because they would now view this world from the perspective of concretely understood jobs. To determine whether such effects did occur, the FWL-EBCE evaluation staff developed the Job-Related Attitudes Scales, an instrument comprised of four scales or clusters of opinions. These clusters will be most meaningful if the items (included in Appendix C) are examined that were used to derive a cluster score. To make this chapter of the report more comprehensible, the clusters are here identified by name, although the particular label used should not be seen as too significant because it generally describes the highest end of the particular scale, while virtually no students had opinions quite that extreme. It should also be noted that the scales are not bi-polar; i.e., a low score does not necessarily represent an attitude that is opposite to that implied by the scale name. The clusters are defined in the table below.

TABLE 3.46

CLUSTERS OF OPINIONS IDENTIFIED IN THE ITEMS OF THE JOB-RELATED ATTITUDES INSTRUMENT

Opinion Label	Cluster	Number of Items	Possible Score Range
Anti-supervisors/employees	1	8	8 - 40
Pro-company/business	2	6	6 - 30
Cautious acceptance of working for others	3	6	6 - 30
Cynical acceptance of job conditions	4	5	5 - 25

Various studies of the reliability of these scales suggest that for FWS students the reliabilities are in the range of .65-.80. This means that in general they are accurate enough for group assessment, but not for individual assessment.

Results obtained from the administration of these opinion items at the beginning and end of the year are presented in Table 3.46. Only students who entered FWS in the fall of 1973 (Group OBC) were used in the presentation of this table. These students also responded to these items at midyear, but since their responses were used in the cluster analysis, data for the cluster scores are not presented here.

The correlation coefficients in Table 3.47 indicate that the four clusters are independent of each other for these students. (The standard error of these correlation coefficients is .17; a hypothesis of zero correlation among the four scales could not be rejected by conventional standards.) It is evident that these clusters represent different dimensions of the underlying attitudes.

Examination of the differences in the pre- and post-mean scores indicates very little change in average level of opinion. The group does appear to be somewhat more diverse in its opinions at the conclusion of the year at FWS, as evidenced by somewhat larger standard deviations, but these differences are not large enough to be considered significant.

TABLE 3.47

CORRELATION COEFFICIENTS, MEANS, AND STANDARD DEVIATIONS FOR JOB-RELATED ATTITUDE CLUSTER SCORES OBTAINED BY FWS ENTERING STUDENTS
(N=33)

Cluster Number	Correlation Coefficients								Mean		Standard Deviation		Possible Range of Scores	Average Item Rating
	Cluster 1		Cluster 2		Cluster 3		Cluster 4							
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
1	--	--	.13	.21	-.19	.27	-.05	.24	29.06	28.85	2.81	4.06	8 - 40	3.62
2	.13	.21	--	--	-.08	.34	.20	.08	18.24	18.00	2.96	3.34	6 - 30	3.00
3	-.19	.27	-.08	.34	--	--	-.30	.32	13.24	14.15	2.69	2.76	5 - 25	2.80
4	-.05	.24	.20	.08	-.30	.32	--	--	13.70	13.61	2.47	2.57	5 - 25	2.70

TABLE 3.48

CORRELATIONS, MEANS, AND STANDARD DEVIATIONS FOR JOB-RELATED ATTITUDE CLUSTERS OBTAINED BY FWS EXPERIMENTAL AND CONTROL STUDENTS
(EXPERIMENTAL N=11; CONTROL N=12)

Statistics	Clusters							
	1		2		3		4	
	FWS Experimental	OPS Control	FWS Experimental	OPS Control	FWS Experimental	OPS Control	FWS Experimental	OPS Control
Means								
Mid	27.82	29.58	19.64	16.92	14.36	14.58	13.64	13.17
Post	29.27	28.25	20.09	15.83	14.45	14.50	13.64	13.92
Standard Deviation								
Mid	3.40	4.62	4.52	3.94	4.23	2.50	2.87	3.21
Post	4.58	5.80	2.81	3.88	4.16	1.78	2.87	2.84
Correlation Coefficients								
	.59	.31	.88	.55	.74	.13	.85	.53

An analysis of covariance was performed on the cluster scores obtained by the experimental (Group C) and control (Group D) students. The control group students completed the opinion items only at midyear and at the end of the year; the midyear scores, rather than the beginning-of-year scores, had to be used as a control variable, along with student age. The means, standard deviations, and correlation coefficients for these two groups on each of the clusters are presented in Table 3.48. The analysis of covariance showed a significant difference between the group means for Cluster 2. The test of the errors of estimate for these two groups was quite significant, however, so the accuracy of this test of significance is uncertain.

The analyses of covariance also showed that the errors of estimate for Cluster 4 were significantly different, and the regression systems for two clusters approach statistically significantly difference. A review of the scatterplots of the scores for these clusters was not helpful in interpretation of these results.

In summary, the Job-Related Attitudes Cluster Scales appear to be useful measures of four dimensions of attitudes toward the world of work which have obvious content relevance. There is, however, little or no evidence to indicate that one year in FWS changes the stated opinions that reflect these attitudes as measured. It seems reasonable to conclude that the attitudes are complex and probably persistent. A longer period of time is probably required if the attitudes are to be changed.

SUMMARY OF OUTCOMES BY PROJECT OBJECTIVES

The information presented in this section leads to conclusions directed to two major kinds of questions: What do the key participants in the FWS-EBCE activities--the students and their parents, and the adult volunteers at the resource sites--think of the school as a means to achieving the student-centered objectives adopted by the program? What progress was made by the students in achieving these objectives?

FWS As Means to Student Outcomes

Student outcomes are, of course, the most important criteria by which an educational program can be judged. In evaluating a developing activity, identifying, creating, and improving the program processes encompasses a set of initial major objectives. These objectives are the target for formative evaluation, but important information of a summative nature can also be obtained. The important summative question in this regard is: What do the key participants think about the crucial factors in the process? The answer can be principally obtained from the perceptions of participants; the perceptions have validity only to the extent that the questions seem relevant.

Student Perceptions of FWS

Eighty-five to 90% of FWS students expressed a strong preference for FWS in comparison with the schools they had attended previously, and said that if again faced with the choice, they would apply to FWS. The major reasons for this preference can be summarized as: (1) FWS provides much more practicial experience and education, (2) FWS allows more individual freedom and responsibility, (3) FWS provides opportunities to learn about occupations, and (4) FWS is much warmer and riendlier than regular schools. When asked to rate school characteristics, 75% of the FWS characteristics were rated positively and none were rated negatively by FWS students; OPS students rated 29% of them positively and 50% negatively. Students were generally positive in their opinions about the learning coordinators. In a free-response interview, 50% of the students cited specific ways that the learning coordinators had been helpful and nearly as large a percentage used terms that essentially described the learning coordinators as warm and friendly.

Parent Perceptions of FWS

When asked to characterize the FWS in a free response, 83% of the parents made positive responses. When they were asked about 19 particular characteristics, 50% of the parents rated the school positively or very positively on 17 of the characteristics; on 6 of the 19, 80% of the parents were positive or very positive. When asked how the school affected their children, parents cited with great frequency factors such as: (1) students liked FWS better than previous schools, (2) students had better attitudes about themselves, (3) students seemed more interested and motivated to learn, (4) students took more responsibility, and (5) students learned more about work and careers. Parents also were positive in their opinions of learning coordinators. Twenty-five of 34 parents said the learning coordinators were enthusiastic about the school and their jobs, and two-thirds of the parents rated the learning coordinators as being of very high quality. The parents did rate the coordinators relatively lower with respect to frequency of contact with parents and effectiveness of school-parent communication.

Student and Parent Perceptions of School Resources

The parents were quite positive in their ratings of resource people and organizations; since parents' knowledge of resources had to be second-hand through their children, this is probably a reflection of student opinions. This probability is confirmed by the fact that 94% of the students said they had benefited from resource persons and 56% said they had benefited from involvement with community or other resource organizations. Some students said they had not benefited from the resource organizations, but no student reported that resource persons had been of no help. About two-thirds of the students said they had learned a lot from the resource persons.

Resource Perceptions of Students and the School

Two-thirds of the resource persons said they thought the experiences at the resource sites had been worthwhile for the students and nearly half said that the students they worked with had increased their job knowledge and abilities. Only one RP said he was dissatisfied with the student(s) who had come to his site. More than half said they thought the students had made appropriate use of the opportunity provided at a specific site. Three RPs were negative, primarily because their students did not keep appointments and did not notify them.

Student Outcome Objectives

Self-knowledge

Significantly more FWS than OPS students said their self-confidence had increased during the year, and that they felt they could express themselves more effectively in a one-to-one situation. More FWS students believed they had learned about themselves because they had had to think for themselves more often, and more FWS students attributed increased self-growth to the activities in the school than did OPS students. FWS students said the school had been effective in helping them assume responsibility and in evaluating their own performance and activities.

Interpersonal Skills

Far West School students expressed the opinion that the EBCE experience had been effective in increasing their ability to "communicate with people in a mature way," and to work with others, and had helped them to improve their interpersonal skills. They rated the school significantly higher than OPS students rated their schools with respect to having helped them learn to get along with others. FWS students also rated the school higher than OPS students rated their schools with respect to how much it helped them to meet and deal with people, but the difference was not as significant.

Basic Skills

Written communication: On the basis of a writing sample judged for quality by independent raters, FWS students showed a very significant increase in their knowledge of the mechanics of writing, their ability to communicate effectively in writing, and the maturity of their written thoughts. When students rated their school with respect to help received in improving writing, FWS and OPS students did not differ significantly. On an interview rating, FWS students rated the school's help in improving writing low relative to other accomplishments, although they still considered the school's help to be satisfactory. It seems clear that FWS students do improve their writing skills, but there is no reason to assume FWS is either more or less effective than OPS schools in this regard.

Reading: Results for reading essentially parallel those for written communication. On a standardized reading test, FWS students did improve their reading skills, but not significantly more or less than OPS students. There is virtually no important difference between the two groups with respect to their opinion about how much the schools helped them or how much reading skill they had gained or lost during the year. Again, it seems clear that the FWS experience does not result in any disadvantage relative to students in more conventional high schools.

Quantitative skills: The results with respect to quantitative skills for FWS students are essentially the same as for the other two basic skills. FWS student effects are not significantly different from those obtained by OPS students with the exception that FWS experimental students rated their program as significantly more helpful in mathematics than did the OPS control students.

Career Awareness and Planning

Significantly more FWS experimental students than OPS control students felt that their school had helped prepared them for work, for college, and in making post high school plans. Almost 90% of FWS students said that the school had helped them in planning for their future, while about one-half the OPS students said this. A significantly larger number of FWS students than OPS students reported that they had also talked about their plans with people who were working in fields of possible interest. An analysis of student statements about long-term plans made at the beginning in relation to those made at the end of the school year showed that FWS students had shifted in the direction of "keeping their options open" by continuing education or training. The percent of OPS students who had apparently chosen specific jobs was significantly higher than was the FWS student percentage. The immediate post-school plans of FWS students also reflected more of shift from beginning to end of year, but they were not significantly different from the OPS students in this respect.

Thirty-six percent of the OPS students said that they saw no relevance of their school program to their plans for the future. No FWS student made such a statement; on the contrary, FWS students rated learning about future careers as the second most important feature of Far West School.

CHAPTER 4: OUTCOME BACKUP RESEARCH

INTRODUCTION

Many questions were posed in Chapter 3, above. The information used in exploring those questions was classified, somewhat arbitrarily, as program outcome data, though it was recognized that the material does not in itself adequately define the outcomes of the FWL-EBCE program. Limitations of the data, having to do mainly with the incongruency between the nature of the program and the state of the art of program evaluation, are treated sufficiently elsewhere.

Further data are presented here that lean more toward the research approach than evaluation. The four studies described are intended to serve as background material to provide the reader a different vantage from which to view EBCE and the presentation of its effects on Far West students and staff.

Appearing first is a description of an anthropological study that depicts what has been happening from the perspective of the ultimate consumers, the students. The complete report of the study is included in Appendix D.

A second study is presented to indicate relative effectiveness of a variety of program features and to attempt to derive meaningful core dimensions from those features.

Next is a study to explore the hypothesis that there are differential sets of attitudes toward tests and testing held by students tested in connection with the evaluation this year. If so, these attitudes need to be identified, for they could conceivably affect the meaning of group differences in test scores.

Finally, the notion was entertained and explored that there may be fundamental differences among members, or, especially, among organizational components of the EBCE staff that if identified might help to explain certain operational problems or program effects.

ANTHROPOLOGICAL OBSERVATIONS

A continuing difficulty for EBCE evaluators has been finding measurements that are at once sensitive and relevant, but also flexible enough to evaluate a program such as EBCE. The traditional pre- and post-test experimental/control techniques have been helpful but seriously limited in tracing student progress. Some dimensions of the program are unable to "sit still" for such testing. It was therefore decided to invite Bob Alvarez and Pat Hishiki, two students working at Stanford University under the supervision of anthropology professor George Spindler, to conduct an ethnographic study of the "human features" of the Far West School (FWS).

Following the methodology of assuming an insider's view to produce data and insights to which the formal structure would not ordinarily be privy, Alvarez and Hishiki spent some 100 hours of fieldwork observing the interrelationships among students, staff, and resource people in the community. They followed a number of students through their daily activities in and around the FWS, accompanying them as observers and later talking to them as interviewers. Their paper, "Anthropological Perspectives of Far West School and Students," not only contains interesting observations and insights about the program, but presents an unusual view of those aspects of EBCE that do not yield to conventional evaluation. (The complete version of their report can be found in Appendix D.)

One of the most emphatic findings in the study was that the FWS Learning Center itself has importance as a learning environment where students can exchange insights, information, and ideas about experiences in the community. Alvarez and Hishiki found that experienced students were effective in preparing novices to deal with resources and resource people they would meet and that students seemed to give and receive information without the competitiveness, secrecy, and withholding that often marks relations in the traditional classroom setting.

Students created a series of "folkways" to deal with the relative freedom of Far West School. Rather than impeding their progress, what Alvarez and Hishiki call the school's "openness and flexibility" caused students to create a "hidden structure" of rules and expectations that they related to their experiences and used (along with peer control) to impose an order on their learning. The study quotes one student who was considering the recruitment of her cousin for Far West. "My cousin," she stated, "is at a school now where she has too much free time. There she's got teachers telling her what to do. She wouldn't have any free time here. She'd have to learn to be responsible about her time."

The study team acknowledged that the way students use and benefit from their community experiences varies significantly from one to another. Yet there are certain common denominators, some of which function almost as added dividends beside the stated goals of the program. For example, each student--whatever rapport he establishes with his resource person and whatever learning he manages to extract from his resource site--does learn how to travel through the city. He learns a strategy for getting from one place to another in an often complex transportation system.

Although there is similarity in the project settings where the students go in the community, Alvarez and Hishiki found little homogeneity in the resource people (RPs) and what they demand from the student. If this is occasionally somewhat disorienting, the study found that Far West students were generally nonetheless well enough motivated to make intelligent demands on the RPs and to attempt to direct the situation in such a way that their goals could be met. While there were unsuccessful meetings between the students and RPs, students were usually flexible enough to be able to deal with disrupted encounters, even trying to rechannel them into an alternative form.

As far as relationships with the staff were concerned, the study found that although interaction was characterized by a general informality and flexibility, a distinct boundary is retained between students and their learning coordinators. "The learning coordinator," Alvarez and Hishiki write, "maintains a skillful balance of informality, friendship, and authoritarianism to which the student has learned to adapt." The staff is generally successful because it is able constantly to reinforce the message (in indirect ways more often than directly) that Far West is a school where each student must perform and finally be evaluated on certain jointly conceived expectations.

One of the beneficial features of the trusting relationship between learning coordinator and student, according to the study, is the willingness "to listen to each other on matters of mutual importance." The authors observed a constant give and take about the Far West program, with students freely criticizing it, offering suggestions for its improvement, and generally manifesting a stake in its success. The continuing dialog about the school, problems students were having in the community and with the staff, and their strategies for changing the program all became part of the dynamic of the learning process.

Professor George Spindler supplied a codicil to the Alvarez-Hishiki study, highlighting a few conclusions. Noting that there are many other areas a similar, but much more exhaustive inquiry might have probed (a more intense "ethnosemantic" examination of student reactions; a more thorough "time-space mapping" of their movements in the community), Professor Spindler said that such a study as this does produce insights that might well be missed by an evaluation of the formal structure of a phenomenon such as Far West School. He concludes:

> The evidence in the report clearly indicates that Far West School is achieving most of its aims quite well, perhaps extremely well... Much of what the individual participant learns is learned outside of the framework of system expectations, even in the case of a flexible system as that of Far West School. It is clear, however, in the analysis that has been done, that Far West students are learning from each other and through casual encounters as well as through their encounters with RPs.

ANALYSIS OF PROGRAM COMPONENTS

Far West School provides an unusual opportunity to study how program features interrelate. The FWS program incorporates a number of innovations, including highly individualized student participation. Studies of interaction can help identify core EBCE elements and explore their relative effectiveness.

During year-end testing, FWS students were asked to rate 26 features of the Far West School program. Each item was rated on a 5-point scale from "not at all successful for you" (value = 1) to "very successful for you" (value = 5). The rating scale formed Question 12 of the Student Plans and Perceptions Summary (SPPS). A copy of the instrument is included in Appendix C. Data collected from analysis of this rating scale can be used both to explore the effectiveness of program features and, when combined with information on student characteristics, to explore certain student/program interactions.

What do students see as successful elements in the program?

Table 4.1 shows the ranking of means for the rating of program features by FWS entering students (Group OBC). It is noteworthy that the first nine of these items, ranked in terms of "success" as experienced by students, are considered by developers of the model to constitute the nucleus of the FWS program. These elements of the program were seen as successful by almost all students. The middle group of items in the ranking are more concerned with specific aspects of the experience-based curriculum and are also seen as quite successful. The nine least popular items ranged from "forms as planning tools," found successful by 15 students, to "diagnostic testing," found successful by only nine students. The placement of academic and basic skill items near the bottom of the ranks reflects the wide dispersion of ratings on these activities, ranging somewhat evenly from not successful to successful. The rating of the tutoring program shows bimodal dis-

TABLE 4.1

SUCCESS OF 26 PROGRAM FEATURES OF THE FAR WEST SCHOOL RANKED BY MEAN

Item	Rank	FWS Entering, Group OBC (N=35)					
		Reduced 3-Level Scale				$\overline{X}$ 5-Level Scale	SD 5-Level Scale
		Neg.	Neut.	Pos.	Omit		
Learning coordinators	1	0	2	33	0	4.57	.60
Learning about careers	2	1	2	32	0	4.46	.73
Learning about oneself	3.5	1	6	28	0	4.23	.83
Learning to make decisions	3.5	1	6	28	0	4.23	.83
Individual meetings with LCs	5	2	4	29	0	4.20	.86
Resource persons	6	1	7	27	0	4.14	.83
Future career planning	7	1	6	28	0	4.09	.87
Project planning	8	4	4	27	0	3.97	.94
Resource explorations	9	3	9	23	0	3.89	.95
Credit assignment	10	3	10	22	0	3.80	1.01
Resource center	11	2	11	22	0	3.77	.93
Community resources	12.5	3	12	20	0	3.71	1.00
Advisory group meetings	12.5	4	9	21	1	3.71	.92
Orientation at resource sites	14	6	12	17	0	3.49	1.13
Resource guides	15	6	11	18	0	3.46	1.08
Resource organizations	16	7	8	18	2	3.45	1.21
Social activities	17	9	10	16	0	3.34	1.17
Forms as planning tools	18	9	10	15	1	3.32	1.18
Physical education activities	19	11	9	15	0	3.26	1.20
Learning academic skills	20	7	16	12	0	3.17	1.13
Improving basic skills	21	11	11	13	0	3.14	1.12
External college classes	22	11	6	15	3	3.13	1.63
Tutoring program	23.5	14	5	14	2	3.00	1.46
Learning packages	23.5	10	12	12	1	3.00	1.08
Feedback from resource sites	25	11	13	11	0	2.89	1.14
Diagnostic testing	26	16	10	9	0	2.57	1.32

tribution. The relative degree of dissatisfaction with physical education activities, learning packages, and feedback from resource sites probably reflects deficiencies in this year's program.

What are the core dimensions of the FWL-EBCE program?

Factor analysis was used for associating groups of program-related items with student characteristics. Nine student-characteristic variables were added to the 26 ratings of program features, and intercorrelations were computed between variables. The student variables included such demographic data as grade level, entry school (high or low socioeconomic), and entering grade-point average (GPA). Added to these variables were spring credits earned, the internal and external usage variables, and the Personal Orientation Inventory (POI) Spontaneity Scale.

"Internal Usage" and "External Usage" variables were developed from ratings by the learning coordinators (LCs). Each FWS student was rated by each of the three learning coordinators as being a "heavy" or "light" user of (1) internal resources at the FWS Learning Center, and (2) external, community-based resources. A score of 2 was used to denote heavy use, and a 1 to represent light use. A mean of the three LC ratings was computed for internal and for external usage. These mean ratings are the variables used for this analysis.

The variable identified as the POI Spontaneity Scale is one of ten subscales of the Personal Orientation Inventory that was administered to FWS students during pre-testing. POI "spontaneity" is defined as "freely expresses feelings behaviorally."

From the matrix of 35 variables, a principal-axis factor analysis was computed, followed by a Varimax rotation.* Table 4.2 displays the seven resultant factors, which account for 64% of the variance; from 7% to 11% of the total variance was associated with each factor. The first 26 variables in Table 4.2 consist of items from the rating scale; the remaining nine items are student variables. Each item is identified in Table 4.2 and the value range of the student variables is indicated.

The rating scale items in Table 4.2 have been reordered to better display the factors. All factor loadings above .30 appear in the table. The highest loading for a variable appears without parentheses; other loadings are enclosed in parentheses.

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*The program is available at the Far West Laboratory Computer Center and follows Veldman's "FACTOR" programming procedures. Veldman, D.J. Fortran Programming for the Behavioral Sciences. New York: Holt, Rinehart and Winston, 1967.

TABLE 4.2

FACTOR MATRIX OF PROGRAM FEATURES AND STUDENT CHARATERISTICS

Variable	Factor Loadings Over .30 (decimals omitted; secondary loading in parentheses)						
	I	II	III	IV	V	VI	VII
RATING SCALE ITEMS							
Individual meetings with LCs	81						
Learning coordinators	70						
Advisory group meetings	61				(-31)		
Project planning	54	(50)			(-35)		
Resource persons	52				(-36)		(30)
Future career planning	48						
Learning about careers	42				(-35)	(-33)	
Tutoring program		85					
Improving basic skills		82					
Learning academic skills		61					(-38)
Learning to make decisions	(34)	56		(41)			
Resource explorations	(43)	54					
Feedback from resource sites			80				
Resource center			73				
Orientations at resource sites		(31)	63				
Community resources			58				(-54)
Social activities			53	(45)			
Resource organizations		(39)		-54			
Learning about oneself			(44)	49			
Learning packages				-46	(-41)		
Physical education activities					-74		
Diagnostic testing					-64	(-38)	
Resource guides						-68	
Forms as planning tools			(44)		(-46)	49	
External college classes							-81
Credit assignment	(38)						-55
STUDENT CHARACTERISTICS							
Entry school 1 = low SES 2 = high SES						66	
Sex 1 = male 2 = female				66			
Ethnic group 1 = white 2 = non-white	(38)					-67	(-31)
Grade 1 = 10th, 2 = 11th 3 = 12th		(-34)		(-44)			-62
External usage: mean score	(30)			(-38)		43	
Internal usage: mean score	(41)					59	(-44)
Spring credits			(-46)			51	
POI: Spontaneity Scale					63		
Grade point average		(-43)		46		(37)	

In this study, factor analysis was used as an exploration tool to assist in generating hypotheses about the various features of the FWS program. The factors to be discussed can be considered no more than interesting suggestions and are clearly in need of supporting studies. The sample of students is extremely small for factor analysis. The student-tied variables are generally complicated representations of the characteristics for which they are named. Partly because of the small sample size and partly because of the confounding effects, many of the variables simply cannot be separated. In sum, these factors are only hypotheses and should be viewed with a good measure of caution.

For reasons stated above, this summary of the factors in Table 4.2 deals only with the 26 program variables. There are several factors in the table suggestive of meaningful clustering of program features. Factor I appears to define the major unique features of the model, with emphasis on interaction with instructional people at both the Learning Center and resource sites, and on project and career planning. Factor II defines a cluster of program features that might be called "being turned on to learning," i.e., indicating motivation toward learning basic academic and decision-making skills. Factor III is less easily characterized, but may be indicative of a level and kind of involvement in those program features that, when taken together, suggest some information seeking, but also some "going through the motions" with lower-payoff activities. Beyond these three program clusters, interpretation of the factors in Table 4.2 becomes less sensible.

The analysis, with all the limitations discussed, does appear to show that this kind of empirical approach to the definition of core features of EBCE is a promising one that should be followed up.

TEST-TAKING ATTITUDES

It was apparent to evaluation staff that there might well be resistance to tests among FWS students as a consequence of the many instruments and the lengthy sessions which were devoted to diagnostic and evaluative testing early in the fall semester. For this reason, a decision was made to examine students' test-taking attitudes. If resistance was present, it appeared reasonable that giving students an opportunity to "go on record" might attenuate the effect of test-resistance in subsequent data collection at year-end.

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TABLE 4.3

PERCENT CHOOSING KEYED ALTERNATIVE ON TEST-TAKING ATTITUDE ITEMS FOR FOUR GROUPS

Item	Key A=Agree D=Disagree	FWS Experimental	OPS Control	FWS Entering	OPS Representative
1. It is good to have tests to give us information about people.	D	29	21	29	13
2. I believe that schools give too many tests to students.	A	47	71	63	42
3. It is all right to ask questions about my future career plans on a test.	D	12	7	15	13
4. I feel upset when I cannot answer a test question.	A	53	36	42	45
5. I would have no objection to answering questions about my personal life on a test.	D	71	50	71	52
6. It is all right to take tests to help a person choose a career.	D	24	7	22	26
7. I like to answer test questions about my interests.	D	24	14	22	7
8. I believe it is possible to find out how much one has learned by taking an achievement test.	D	35	64	44	23
9. I feel scared when I know I am to take a test of any kind.	A	12	29	22	26
10. I believe it is possible to find out how bright I am by taking an intelligence test.	D	53	71	66	58
11. I am looking forward to a day when I never take any more tests.	A	59	57	66	29
12. I think it is a good practice to "guess" on a test question.	A	47	36	34	45
13. I believe there are "tricks" that will help you to score well on tests.	A	24	29	29	39
14. I get emotionally upset when I am told that I am to take tests.	A	18	7	12	10
15. I am not afraid when I am taking a test.	D	24	29	27	23
16. I enjoy taking a test when I have studied for the subject.	D	35	14	34	23
17. I do not want my parents to know how I do on tests.	A	29	29	29	16
18. I usually agree with the results of tests I have taken.	D	41	29	51	39
19. I believe that schools use tests properly most of the time.	D	35	57	46	42
20. Test questions make me feel like arguing about the right answer.	A	59	64	63	52
21. I believe test scores would be helpful for me in making a career choice.	D	35	21	49	39
22. There is considerable fear of taking tests among students I know.	A	35	50	34	48
23. I am not easily distracted when taking a test.	D	53	36	54	45
24. I feel angry when I forget the answer to a question I should know.	A	82	86	68	84
25. I believe that most people cheat on tests if they can get away with it.	A	65	93	76	90
26. I believe that people often lie about themselves when taking a personality test.	A	53	57	59	81
27. I am tired of taking so many tests.	A	71	50	76	45
28. It doesn't matter to anyone whether or not I answered these statements the way I really feel.	A	24	14	24	42

Questions designed to determine attitudes toward tests were arranged so that agreement or disagreement with a statement would randomly reflect a positive or negative attitude. Responses were then scored to yield a total score, based on each negative opinion being given a score of +1, and each positive opinion a score of 0. Thus, since there were 28 questions, the total score could range from 0 to 28, with a score of 28 indicating a student had negative opinions on all questions.

Table 4.3 presents the items making up the test* and the percent choosing the keyed alternative for each item in the experimental, control, entering FWS, and OPS comparison groups. Total score means and standard deviations for the same four groups are given in Table 4.4. A Kruskal-Wallis test of the rankings on the basis of total scores for the experimental and control groups showed them to be highly similar.

TABLE 4.4

DESCRIPTIVE STATISTICS FOR FOUR GROUPS ON TOTAL TEST-TAKING ATTITUDE SCORE

Statistics on Test-Taking Attitude Score	Group			
	FWS Experimental	OPS Control	FWS Entering	OPS Representative
Mean	12.19	11.29	12.90	10.94
Standard deviation	4.93	4.71	4.76	3.53
N	16	14	39	31

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*See Appendix C for the instrument and a presentation of technical information concerning its development.

STAFF-PROGRAM ISSUES

The Position of the FWS Staff on Major Issues of Educational Philosophy

Some difficulties were encountered during the first semester in implementing various instructional and guidance procedures as intended. (See Chapter 5.) One possible explanation is that philosophic differences exist among key staff members and that these differences led to different interpretations of adopted procedures wherever specifications were ambiguous or permitted more latitude than was intended.

In an effort to identify staff biases on issues of educational philosophy, a rating scale was constructed and administered to ten key members of the FWL-EBCE staff. The intention was not to impose philosophic unity, but to identify the philosophy underlying the Far West model, including whatever diversity exists, and to make appropriate provisions for accommodating such diversity.

The rating scale was adapted from Neil Postman and Charles Weingartner.* The Postman-Weingartner position was selected because (1) it appears to be very compatible with the philosophic basis of EBCE as originally conceived by the U.S. Office of Education and as developed at the pilot sites, and (2) Postman and Weingartner have stated their position in sufficiently specific terms of school practice to permit the construction of a rating scale. According to Postman and Weingartner, all schools, by definition, perform certain essential functions, such as structuring students' time and activities, defining "achievement" and "good behavior," and supervising and controlling the young. Schools differ in the specific procedures and practices they adopt in carrying out these essential functions. It is at the level of procedures and practices--"conventions" in the Postman-Weingartner terminology--that schools may be distinguished from one another and evaluated. They identify 31 specific conventions, having to do with such general factors as the variety of options open to students; freedom of student choice; utility and relevance of what is learned; commitment to and accountability for reaching prescribed goals; breadth of community participation; and rational, non-authoritarian relationships among participants.

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*Postman, N. and Weingartner, C. The School Book (New York: Delacorte Press, 1973).

A 31-item rating scale was developed by adapting Postman and Weingartner's 31 conventions. In one version, called the "Ideal" scale, the respondents were asked to consider their personal view of an ideal EBCE program and to rate each item with respect to its desirability in that ideal version. A 7-point scale was used, where a rating of 7 meant that the item is "essential" and a rating of 1 meant that it is "totally unacceptable." Abbreviated versions of the items are shown in Table 4.5. The complete items are presented in Appendix C.

The scale was administered to ten members of the FWL-EBCE staff who were most influential in shaping the FWS model. Seven respondents were members of the Design Control Committee (DCC) representing senior staff in program management, school operations, development, and evaluation. The other three respondents were the three LCs, who were most directly involved in the implementation of the model at FWS.

Mean ratings for each item were computed for (1) the total group of ten raters (LCs and DCC) combined, (2) the seven members of the DCC as a group, and (3) the three LCs as a group. Mean ratings for each of these three groups on each item are shown in Table 4.5. The ordering of the items is by mean rating for the total group of ten raters.

Results for ratings on the Ideal scale are summarized in Table 4.6. The mean of 6.36 for the ten raters indicates that the senior FWS staff is in strong agreement with the Postman-Weingartner position, the mean rating across all 31 items falling between "very desirable" and "essential." Further evidence of this agreement is that 49.4% of the 310 ratings (10 raters on 31 items) were "essential," the highest rating on the 7-point scale. Note that the raters were stating the opinion that the item is essential to an ideal EBCE program, not to education in general.

TABLE 4.5

MEAN RATINGS BY TWO GROUPS, SEPARATE AND COMBINED, FOR 31 ITEMS ON A SCALE OF IDEAL EBCE AND A SCALE OF ACTUAL EBCE AT FAR WEST SCHOOL

	Abbreviated Item*	Ideal Scale Mean Ratings			Actual Scale Mean Ratings		
		DCC +LC	DCC	LC	DCC +LC	DCC	LC
1.	Question-asking, problem-solving, research valued more than memorizing, ventriloquizing.	7.00	7.00	7.00	6.15	6.07	6.33
2.	Excellence judged broadly to include other skills as well as reading and math.	6.90	6.86	7.00	6.05	6.00	6.17
3.	Latitude in choosing among optional activities.	6.80	6.86	6.67	6.50	6.71	6.00
4.	Resources include people and problems outside school walls.	6.80	6.86	6.67	6.30	6.29	6.33
5.	What is learned is valued rather than amount of time spent.	6.80	6.71	7.00	5.40	5.14	6.00
6.	Responsibility to students' future has higher priority than to social institutions.	6.70	6.57	7.00	5.85	5.57	6.50
7.	Collaborative rather than adversary relationships between teacher and student.	6.65	6.57	6.83	6.20	6.21	6.17
8.	Variety of people in teaching role.	6.60	6.57	6.67	6.70	6.57	7.00
9.	Reading ability only one way to express intellectual competence and interest.	6.55	6.50	6.67	6.25	6.21	6.33
10.	Teachers function as coordinators or facilitators rather than as dictators.	6.55	6.43	6.83	5.50	5.14	6.33
11.	"New" subjects, e.g., anthropology, cybernetics, urbanology, accepted.	6.50	6.43	6.67	6.40	6.14	7.00
12.	Self-knowledge and feelings accepted as worthwhile, legitimate subjects of inquiry.	6.50	6.43	6.67	5.70	5.71	5.67
13.	Concept of knowledge, attitudes, and skills oriented toward future.	6.50	6.36	6.83	4.95	4.29	6.50
14.	Capitalize on teachers' strengths and help them with weaknesses.	6.50	6.43	6.67	4.65	4.21	5.67
15.	Constructive, nonpunitive evaluation of teachers and administrators.	6.50	6.43	6.67	4.10	4.00	4.83
16.	What is expected and how it will be judged, made clear to students.	6.50	6.43	6.67	4.05	3.86	4.50
17.	Nonpunitive grading, no homogeneous grouping, minimum of labeling.	6.45	6.29	6.83	6.35	6.21	6.67
18.	School is accountable for its performance to students and parents.	6.40	6.29	6.67	4.85	4.21	6.33
19.	Daily sequences not arbitrary but related to what students are doing.	6.35	6.43	6.17	6.30	6.29	6.33
20.	Students collaborate rather than compete.	6.30	6.00	7.00	6.05	6.07	6.00
21.	Students may supervise themselves, have sense of control.	6.20	6.14	6.33	5.35	5.21	5.67
22.	Brings together students of great diversity in background and ability.	6.10	5.71	7.00	6.40	6.29	6.67
23.	Channels for parent grievances and community participation.	6.10	5.71	7.00	4.00	3.79	4.50
24.	School small enough that supervision can be personal, human.	6.05	5.86	6.50	6.20	6.14	6.33
25.	Students allowed to organize own time, decide how to use it.	6.00	6.14	5.67	5.95	6.21	5.33
26.	Alternative programs, contrasting arrangements for learning offered.	5.90	5.71	6.33	5.60	5.29	6.33
27.	Standardized tests not used, or only with extreme caution, skepticism.	5.90	6.14	5.33	4.30	4.07	4.83
28.	Knowledge for use in daily life valued rather than "for knowledge's sake."	5.80	5.71	5.67	5.10	5.29	5.33
29.	Aversive responses avoided, reinforcing ones applied.	5.80	5.71	6.00	4.65	4.57	4.83
30.	School's activities are student, rather than mostly staff, activities.	5.70	6.43	4.00	5.40	5.50	5.17
31.	Required activities justified on empirical or rational basis of relevance.	5.70	6.57	3.67	5.25	5.64	4.33

* See Appendix C for full statement of items. All items adapted from Postman, N. and Weingartner, C. The School Book. New York: Delacorte, 1973

TABLE 4.6

IDEAL SCALE MEANS AND RANGES OF ITEM MEANS FOR TWO GROUPS OF RATERS AND FOR THE COMBINED GROUP

Rater	Mean for All Items	Range of Item Means
LCs (N=3)	6.41	3.67 - 7.00
DCC (N=7)	6.34	5.71 - 7.00
Combined Group (N=10)	6.36	5.70 - 7.00

While the LCs tended to give higher ratings (mean = 6.41) than members of the DCC (mean = 6.34), the difference is not statistically significant. However, statistically significant differences were found among individual raters with respect to how strongly they favored the Postman-Weingartner position. Results for individual raters are shown in Table 4.7. Individual differences among raters within the combined group, the DCC, and LCs are all statistically significant.* These differences appear to have no practical importance, however, in view of the concentration of individual ratings near the upper end of the scale; i.e., these differences occur, with very few exceptions, within a very restricted range of positive ratings.

It is possible that the scale items are simply "motherhood" statements, and that the scale is insensitive to important differences in staff attitudes. For example, it is doubtful that any rater would favor "adversary" over "collaborative" relationships between teachers and students (item 7 in Table 4.5 and item 20 in Appendix C). But raters could well differ in their beliefs about how directive and authoritarian a teacher should be in certain practical situations. The scale as presently constructed does not get at such differences in staff attitudes.

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*Respective values of F for the total group, DDC, and LCs are 3.36 ($p < .01$), 2.86 ($p < .05$), and 5.30 ($p < .01$).

TABLE 4.7

IDEAL SCALE MEANS AND STANDARD DEVIATIONS FOR INDIVIDUAL RATERS

Rater	Means for All Items	Standard Deviation
DCC:A	6.47	0.48
B	5.98	0.71
C	6.23	0.84
D	6.65	0.49
E	6.42	0.85
F	6.39	0.65
G	6.23	0.76
LCs:H	6.39	0.96
I	6.65	0.45
J	6.19	1.62

The results with the Ideal scale suggest the following conclusions:

1. Ten key members of the Far West EBCE staff are in close agreement in educational philosophy with the position represented by Postman and Weingartner.

2. There are individual differences among the ten key staff members in the extent to which they subscribe to the Postman-Weingartner position. These differences occur within a relatively narrow range of positive attitudes toward that position.

3. The Design Control Committee as a group is not significantly different in its position from that of the learning coordinators as a group.

The Educational Philosophy Underlying the Current Program at FWS

To examine staff perceptions of current practices at FWS, a second scale was adapted from the Postman-Weingartner conventions. This scale, called the "Actual" scale, contained exactly the same 31 items as those in the Ideal scale and was administered to the same ten raters. In the Actual scale the respondents were asked to rate each item on the extent to which it had been adopted and put into practice at FWS. A 7-point scale was used in which a 7 meant "widely practiced" and a 1 meant "not practiced at all."

Mean ratings for each item for the combined raters, the DCC, and the LCs are shown in Table 4.5. Group results are summarized in Table 4.8. The combined-group mean of 5.56 indicates that the ten raters perceive FWS as having adopted the Postman-Weingartner conventions fairly extensively. The mean rating across all 31 items is about midway between "practiced to some extent" and "widely practiced." A two-tailed test of the difference between the means for the LCs and DCC yielded a "t" of 3.149, which for 30 degrees of freedom is significant at the .01 level. This indicates that the LCs (who are closer to school operations) perceive more extensive adoption of the conventions than do the members of the DCC. A product-moment correlation coefficient of .60 was obtained between the LC and DCC ratings. This correlation, which for 30 degrees of freedom is significant at the .01 level, indicates significant and moderately strong agreement between the two groups in their perceptions of the relative extent of adoption of the 31 Postman-Weingartner conventions at FWS.

TABLE 4.8

ACTUAL SCALE MEANS AND
RANGES OF ITEM MEANS FOR TWO GROUPS OF RATERS
AND FOR THE COMBINED GROUP

Rater	Mean for All Items	Range of Item Means
LCs (N=3)	5.87	4.33-7.00
DCC (N=7)	5.45	3.79-6.71
Combined Group (N=10)	5.56	4.00-6.70

Significant differences were found among individual raters. Individual means and standard deviations are shown in Table 4.9. Individual differences among raters within the combined group, the DCC, and LCs are all statistically significant.* It can be seen from Table 4.9 that the difference in ratings between the two groups of raters is attributable principally to the low mean ratings of raters B and C and the high mean rating of rater I. It appears that differences among raters are of greater practical significance than differences between the two groups; i.e., individual perceptions are not strongly related to whether the rater is a "designer" or an "implementer."

An analysis of the correlation between the ratings on the Actual and Ideal scales yielded a product-moment coefficient of .34 (combined group ratings). For 30 degrees of freedom, this is significant at the .05 level, indicating a significant but quite modest correspondence between the relative importance or desirability of the items and the relative extent to which they have been adopted at FWS.

TABLE 4.9

ACTUAL SCALE MEANS
AND STANDARD DEVIATIONS
FOR INDIVIDUAL RATERS

Rater	Mean for All Items	Standard Deviation
DCC:A	6.26	0.86
B	4.84	1.71
C	4.84	1.39
D	5.58	1.04
E	5.23	1.45
F	5.98	1.27
G	5.35	1.67
LCs:H	5.02	1.56
I	6.68	0.59
J	5.87	1.09

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*Respective values of F for the total group, DCC, and LCs are 6.33 ($p < .01$), 3.94 ($p < .01$), and 16.21 ($p < .01$).

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These results suggest the following conclusions:

1. Ten key staff members perceive FWS to have adopted the Postman-Weingartner conventions fairly extensively.

2. There are significant differences among individual staff members in their perceptions of practices at FWS.

3. LCs tend to see the adoption of the Postman-Weingartner conventions as more extensive than do members of the DCC. There is strong overlap between the groups, however, and differences among individual raters appear to be of more practical significance than between groups.

4. There is a low positive correlation between the relative degree of desirability of the conventions and the relative extent of their adoption at FWS as judged by the ten raters.

Differences Between DCC and LC Ratings. An item-by-item analysis was performed on the differences between the DCC and LC ratings on the Actual scale. A difference in group means on any item was considered significant if it was greater than twice the standard error of the difference. This test resulted in the identification of two items on which the two groups differed significantly. The full statement of one of those items is as follows:

> The school's concept of knowledge, attitudes, and skills is oriented toward the future. It has realistically assessed what students will need to know in years ahead and is making some serious attempts to help them learn those things.

For this item the mean DCC rating was 4.29, or slightly above "practiced to some extent." The mean LC rating was 6.50, or somewhat below "widely practiced." This difference of 2.21 is the largest difference between the two groups on any item.

The second largest difference occurred for the following item:

> The school is not afraid to be held accountable for its performance. The staff tries to make explicit to parents and students what it wishes to accomplish (and what it does not), how it intends to do this, and what kinds of evidence it will accept as a sign of success.

For this item the DCC mean was 4.21 and the LC mean was 6.33, a difference of 2.12.

It was recommended to program management that these and other items may signal real problems that hinder implementation and stabilization of the model. The designers and implementers may have two distinctly different views of the actual procedures at FWS, or the differences may be definitional. For example, how do the two groups define "what students will need to know in years ahead," "serious attempts to help them learn those things," "to make explicit...what it wishes to accomplish...and what kinds of evidence it will accept?" Attempts should be made to achieve common understanding of key terms and establish commonly agreed-on objectives and standards for school operation. Results of the ratings have been used as a framework and point of departure for arriving at common definitions and agreements. They have also been influential in revisions to prescriptive documentation of operating procedures and in staff training during the summer.

CHAPTER 5: MODEL DEVELOPMENT AND IMPLEMENTATION

This chapter presents information from two areas: (1) a description of the formative evaluation process within FWL-EBCE and a presentation of the results of the evaluation of major model procedures during FY74; and (2) an assessment of the instructional system as implemented by the Far West School, based on information collected from staff and students through the formative evaluation process.

FORMATIVE EVALUATION OF STUDENT-RELATED PROCEDURES

Formative evaluation of EBCE-model procedures during FY74 was an integral part of the program development process. As such, the main tasks involved in the procedures evaluation efforts were performed by development staff. Evaluation staff provided assistance in design, data analysis, and review.

Three major sets of student-related procedures underwent formal testing and evaluation during FY74:

1. Student Diagnosis
2. Student Orientation
3. Student Guidance

For each of these three sets of procedures, an initial specification was made prior to implementation; a test plan was written specifying the schedule and objectives of the evaluation, the kind of information to be collected, the methods of information collection, and the proposed methods for analysis; a formative-evaluation test report was produced summarizing the findings; and finally the procedures were revised in view of the findings. Each of these steps has full documentation in a series of internal reports. Summaries of the important findings are presented below.

Student Diagnosis Procedures

Preliminary Specification

During their first few weeks at Far West School, students' interests, current achievement levels, educational needs, and career goals are inventoried. This entry assessment serves two purposes. First, it provides students with information about themselves that will help them plan their educational programs. Second, it provides learning coordinators (LCs) with information they need in developing strategies to: (1) help individual students identify their educational, career, and personal development aims, and (2) provide students with the guidance and support necessary to plan and pursue productive learning programs.

Diagnostic procedures specified that a report be compiled and made available to each student and his/her learning coordinator before the end of the three-week orientation period. The report integrated information about each student's interests (both expressed and measured), abilities, FWS and Oakland Public Schools (OPS) requirements to be met, and educational and career plans. It concluded with recommendations for the kind and level of career development and educational activities seen by the diagnostician as appropriate to the student's unique combination of needs, interests, and abilities. Each student's learning coordinator discussed the report with the student.

Evaluation Test Plan

The Test Plan provided for the following data to be gathered and analyzed in order to evaluate the effectiveness of the procedures:

Assessment of Preliminary Diagnostic Report. This instrument has two parts: part one consists of a set of questions LCs were to ask students during or immediately after diagnostic interviews; part two contains questions for the LCs themselves to answer concerning the diagnostic interview. Forty questionnaires were received. The dates on the questionnaires suggest that many were either not completed at the time of the diagnostic interview or that the interview itself did not occur until late in the semester.

Follow-Up Assessment of Preliminary Diagnostic Reports. This questionnaire was completed by students at the end of the semester during summative evaluation midyear testing. Forty-nine questionnaires were received.

Long-Term Planning Forms. A sample of students' Long Term Plans were to be analyzed to determine the effect of diagnostic information on students' planning. Examination of the sample revealed that only five out of 20 of these forms were completed after diagnostic interviews.

Results

Table 5.1 summarizes the information collected, the instruments used, the problems encountered, and the action taken to resolve them.

TABLE 5.1

SUMMARY OF DIAGNOSTIC INFORMATION COLLECTION

Information Needed	Instruments to be Used	Major Problems Encountered	Action Taken
Oakland Public School District Requirements	Public school transcripts	Inaccuracies and/or delays in receipt	LCs obtained, verified, and provided students with their course and credit requirements.
Far West School Requirements			
Mathematics (grade-level performance)	Iowa Tests of Educational Development	Could not be scheduled until October; results available approximately a month later.	Percentile rankings were obtained from an alternate test.
Reading (grade-level performance)	Iowa Tests of Educational Development	Could not be scheduled until October; results available approximately a month later.	Percentile rankings were obtained from an alternate test.
Writing	Instrument developed by FWS	Not developed by beginning of semester	LCs and skills specialist conducted informal diagnosis and are monitoring progress.
Oral Communications	Instrument developed by FWS	Not developed by beginning of semester	LCs and skills specialist conducted informal diagnosis and are monitoring progress.
Expressed Interests	Initial Student Planning Form	No major problems	
Educational and Career Plans	Initial Student Planning Form	No major problems	
Measured Interests	PLAN Interest Inventory	Self-administered; eight students did not complete.	Students received repeated reminders. Diagnostic reports were delayed for eight students who did not complete the inventory.
Abilities	Developed Abilities Profile (DAP)	Group administration; necessary to administer several times because students did not show up.	Rescheduled until all students had completed.

In addition to problems shown in the table, there was general concern about students' motivation to take the interest inventory and the abilities test and about the conditions of test administration. Many students made negative comments about the tests during and after testing sessions; tests had to be rescheduled several times because students did not show up to take them, and many students needed repeated reminders to complete self-administered diagnostic instruments. In addition, when tests were administered in large groups, conditions were somewhat crowded, and it was difficult for the test administrator to maintain student rapport, cooperation, and interest in the test.

Data analysis and observation during the conduct of student diagnosis led to the following findings:

1. Students objected to the information-collection stage of diagnosis. In addition to the observations already mentioned above about the difficulties encountered in obtaining the information, approximately 75% of the student comments made about the diagnostic program on the Follow-Up Assessment of Preliminary Diagnostic Reports were complaints about testing.

2. Students did react positively to their diagnostic reports. Approximately 75% reported on the Assessment of Preliminary Diagnostic Report that they liked the reports, and LCs reported on the same questionnaire that 90% of the students were interested in their reports.

3. Students did not know the purpose of diagnosis. When asked on Follow-Up Assessment of Preliminary Diagnostic Reports, "What is the purpose of the diagnostic testing program?" only three students out of 49 indicated that it was to provide them with information about themselves. A large number of students did not respond to the question at all or answered with rather vague comments such as, "...to see what you were like and what you are." Some students confused diagnosis with evaluation, stating that the purpose of the test was to measure their progress and thereby measure the effectiveness of the school.

4. Producing individual written diagnostic reports was not an efficient and cost-effective way to present diagnostic information to students and LCs.

5. The opinions of the three LCs about the usefulness of the diagnostic reports varied. The overall judgment of one LC was that the report. were not useful; another judged them to be useful; and the third found them more useful than not. The responses in Table 5.2 to questions on the Assessment of Preliminary Diagnostic Reports reflect these conflicting opinions. It appears that judgments regarding the usefulness of the reports in this case were not related to their content, but that the LC was the significant variable.

TABLE 5.2

LEARNING COORDINATOR JUDGMENTS ON USEFULNESS OF DIAGNOSTIC REPORTS

Question	No. of Students in LC Groups	LC's Impression	
		Yes	No
Did the diagnostician's recommendations stimulate thought about and aid in the formulation of the student's long-range plans?			
Learning Coordinator 3	15	13	2
Learning Coordinator 1	11	7	4
Learning Coordinator 2	14	1	13
TOTAL	40	21	19
Do you think the report will enable you to help the student in program planning?			
Learning Coordinator 3	15	12	3
Learning Coordinator 1	11	8	3
Learning Coordinator 2	14	0	14
TOTAL	40	20	20
Do you think the diagnostic report had any effect on the student's thinking about his or her long-range plans?			
Learning Coordinator 3	15	13	2
Learning Coordinator 1	11	6	5
Learning Coordinator 2	14*	1	12
TOTAL	40	20	19

* The learning coordinator judged only 13 of 14 students on this question.

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Conclusions

Based on the test findings and the problems encountered during the conduct of the diagnostic program, diagnostic procedures have been revised to specify that the following conditions be met:

1. OPS transcripts are obtained and verified before the semester begins. This will necessitate making arrangements to obtain transcripts directly from the Oakland schools data bank as soon as they are processed at the end of the semester, and developing procedures for verifying them with OPS counselors.

2. The lengthy, initial diagnostic report interrelating a student's expressed interests, his/her abilities and interests as measured by instruments, and his/her academic requirements for high school graduation has been eliminated. Diagnosis has been assimilated into the framework of Student Guidance. As such, it is structured as an ongoing process of assessment and reassessment of student needs, achievements, interests, and attitudes. Several specific types of information about the student are collected throughout his/her first weeks of enrollment:

    a. OPS District subject and credit requirements for graduation;

    b. reading and mathematics skills level on a nationally-normed test (eighth-grade equivalencies are an OPS graduation requirement);

    c. oral communications and writing skills levels; and

    d. educational and occupational interests and goals.

3. The purpose, nature, and limitations of all diagnostic tests are explained to students, with an explanation of how test results will be used.

4. Interest inventories and abilities tests are made optional for students. Students who are not able to express interests or who have foreclosed a particular occupation are strongly encouraged to take at least an interest inventory to give them an empirical base on which to begin exploring careers.

Student Orientation Procedures

Preliminary Specification

The purpose of student orientation procedures is to help students make the transition from traditional classroom learning to the EBCE curriculum. Orientation was designed to: (1) allow students to begin taking responsibility for making decisions by choosing among optional activities and scheduling; and (2) provide enough structured activities so they would know what was expected of them at Far West School. The three-week orientation program was to emphasize:

1. program planning processes including long-range, semester, and project planning;
2. learning resources (what they are, how they are used, and where they are located);
3. organizational structure of FWS and its administrative procedures;
4. diagnosis of students' needs (discussed in the preceding subsection); and
5. student adaptation to the program (by requiring participation in activities related to items 1-4).

The following techniques were specified for accomplishing the five goals above:

- workshop discussions within the learning coordinator (LC) advisory-group structure, with a maximum of ten students per workshop;
- group discussions and group practice in completing forms;
- student visits to resources, preceded by preparation from the LC in the student group and followed by discussions with the LC and other members of the student group (these visits to resources were to serve as self-discovery activities through which the student would understand the need for planning ahead before going to a resource and would learn to use the resource effectively);
- self-instruction using modules of the American Institutes for Research Career Guidance Program; and
- completion by each student of a mini-project which would synthesize most of the elements listed above.

Evaluation Test Plan

Listed below are the methods which EBCE staff used for gathering evaluative data during and after orientation:

- A Student Orientation Objectives Checklist was distributed; the LC and student were to complete it together as the student completed the orientation objectives.
- Weekly LC questionnaires were used during orientation to gather information about the problems and the successes students were experiencing during that period.
- Tapes of LC discussion sessions were made in which they elaborated on successes and problems during the orientation.
- A questionnaire was given to all students immediately following orientation to elicit their reactions to the program. Only 17 students returned this and an analysis of these 17 showed them not to be a representative sample of FWS students. (There was a preponderance of females, whites, and those who planned to go to college.)

- The staff drew a random sample of 15 students, five from each LC group, and reviewed their files closely to see whether they had completed orientation objectives. This judgment of their completion of orientation objectives was compared with that of their LCs. Three months later, the staff interviewed 11 of these students to find out whether orientation was helpful in the long run.

- Instructional and development staff members were given a questionnaire which required them to prioritize both the information students should receive during Orientation and the orientation methods. This was used in making revisions in the orientation program.

The weekly LC questionnaire and taped discussions were of limited use because they were immediate, often emotional, reactions to the problems LCs faced during orientation. Thus, while they may identify some problems, they do not go far in suggesting viable solutions.

Results

1. Orientation procedures were documented only shortly before the opening of FWS for the fall. Time pressures did not permit staff-development workshops that would explain to the instructional staff the underlying concepts of the newly written procedures and that would prepare the LCs to implement the procedures effectively. Instead, the procedures specifications were distributed to the instructional staff and informal group meetings were held by developers to clarify the procedures. This method proved inadequate for two reasons: (1) procedures were somewhat complex; and (2) only one member of the instructional staff had any previous direct experience with FWS students (the FWS director had been in the program only one month; one of the three LCs was newly hired and had received little training; another LC had served in a noninstructional capacity within EBCE the previous year). As a result, the procedures were but partially understood by FWS staff and not fully implemented according to plan.

2. There were fewer resources available for use by students than planned. Substantial staff efforts spent in planning and curriculum development reduced the manpower available for developing resources. Some resources were developed but not yet written into guides; policy at that time precluded the use of a resource before its guide was approved.

3. Two resource-organization Orientations were scheduled for early in the second week; career explorations followed immediately for some students. The orientations and explorations came too early for the students to assimilate. There was insufficient time between orientations and explorations for student/LC feedback.

4. Based on the review of a sample of student files, students did not complete most of the orientation objectives; that is, most fell short of the expected performance in program planning, use of resources, efficient scheduling of time, and project planning.

5. From the questionnaires and interviews (both using somewhat biased student samples) several results were obtained:

- The most frequent complaint (made by approximately 65% of the students) was that testing came during the first part of orientation and that too many forms were required. At least four recommendations were made that the purpose for both tests and forms be more clearly explained and that more help be given in assisting students in completing forms.

- Students generally felt that the orientation had helped them adjust to the freedom they have in EBCE; the two activities they listed as most responsible for this were their visits to resource persons and their work with LCs.

- Students reported mixed feelings about their RP and RO visits during orientation. Students said RPs were far more interesting and informative than ROs. (On a 7-point scale from "very boring" to "very interesting," all but three students rated RPs above the midpoint.) ROs received ratings evenly split above and below midpoint. Students reported there were not enough RPs in enough different categories to satisfy their needs and interests. About five students said they wished they had had more help in locating and using RPs during orientation.

- Most students (about 80%) were pleased with the help they had received from their LCs during orientation. They indicated that this interaction (both in groups and individually) gave them whatever understanding they had of the program.

- Most students (about two-thirds) responded that the orientation was too long.

- Many students asked for more help in understanding planning, requirements, credit, grades, program forms, use of resources, EBCE staff functions, and use of the EBCE library (75% asked for at least some help understanding at least one of these areas).

6. Following orientation in September, a questionnaire was administered to 13 members of the instructional and development staffs. The respondents were asked to assign relative priorities to various FWS orientation activities. Twelve items (listed below) received ratings of "top priority by nine or more of the 13 respondents. Following each item is an index which indicates the ratio of experience-based to FWS-based activities. For example, the index (2/11) indicates that 2 respondents felt the process would best be accomplished through practical experience and 11 thought FWS-based activities would be a better means of accomplishing it.*

   a. Students should learn information about the goals and objectives of the program. (0/13)

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*If the two numbers add up to more than 13, this means a respondent mentioned two methods for that item.

b. Students should learn information about graduation requirements. (1/13)

c. Students should be able to develop semester goals and plans. (1/12)

d. Students should be able to develop project plans including asking initial questions, seeking resources, and stating project goals and objectives. (7/10)

e. Students should learn about the kinds of resources available in this program and be able to locate and use them. (7/8)

f. Students should be able to ask the right kinds of questions when visiting RPs. (6/9)

g. Students should know what participation in the program means and sanctions for nonparticipation. (1/13)

h. Students should learn the purpose of forms in this program. (0/13)

i. Students should be able to plan and manage their time. (4/10)

j. Students should know the importance of long-range plans and know how to approach the problem of long-range planning. (2/12)

k. Students should be able to complete weekly schedules and weekly activity summaries. (2/12)

l. Students should know how their work will be evaluated and credit assigned. (3/11)

The questionnaire asked for methods of instruction that would most likely accomplish the orientation goals. The response showed that the staff felt interaction with the students at FWS is the most effective way to accomplish the teaching and learning.

Conclusions

There emerged three general recommendations for modification of the process of procedures' development: (1) all procedures should be preceded by concept papers which outline the underlying theory and give the rationale for the stated procedures, (2) procedures should be thoroughly reviewed by instructional staff during the development period, and (3) all procedures should be accompanied by an appropriate set of training materials to prepare staff in the use of the underlying concepts and the procedures. These recommendations were incorporated into the development process.

Specific to orientation, several actions were taken as a result of the evaluation findings: (1) a concept paper for future orientation (and guidance) of students was prepared; (2) the orientation procedures were revised and reconstructed around this concept paper, with input from the FWS instructional staff sought during reconstruction of the procedures; (3) intensive staff development sessions were held during the last two weeks of August, during which time the instructional and development staffs thoroughly discussed the implementation of all student-related procedures; and (4) the orientation objectives were reassessed in view of the 12 priorities mentioned on the previous page. The orientation period was restructured to begin with a series of FWS-based activities gradually expanding to resource-site activities. Students are encouraged to work at their own paces to fulfill the set of orientation objectives. Returning students are invited to serve as teaching assistants and workshop leaders during orientation.

The responsibility for resource development and maintenance has been transferred from the FWL-EBCE development staff to the FWS staff. To accomplish this, a new position of resource analyst has been added to the FWS staff. This person has primary responsibility for developing and maintaining the resource pool.

The requirement that a comprehensive guide be prepared on, and reviewed by, a resource before contact by students has been dropped. This will eliminate any delay between resource development and usage (complete guides will be prepared after initial student contact).

Student Guidance Procedures

Preliminary Specifications

The student guidance system that underwent preliminary testing in the Experience-Based Career Education program at Far West School incorporates a broader range of functions than is usually associated with the term "guidance." At Far West School, student guidance is fused with instructional functions and designates the full set of staff and student activities associated with personalized student program planning and management. Traditional guidance functions--helping students learn about their own interests, abilities, and values; helping them integrate what they know about themselves with available information about career and educational opportunities; and helping them learn to formulate long-range goals and plans for achieving them--are central to the instructional staff's daily interactions with students. Planning and managing individualized learning activities, monitoring progress, helping students integrate their diverse learning experiences in the community into a coherent educational program, and providing adult direction and support are essentially guidance functions. This fusion of instruction and guidance is a natural outgrowth of the key assumptions and objectives underlying the Far West Laboratory's Experience-Based Career Education (EBCE) model.

Program Planning. Program planning procedures serve three general purposes:

1. to function as learning activities through which the student develops his decision-making and problem-solving capabilities;
2. to ensure a purposeful, goal-oriented program satisfying the student's educational needs and planned with maximum collaboration from him; and
3. to provide FWS staff with the guidelines for organizing and managing a student's program.

Progress Monitoring. Progress monitoring procedures comprise the continual supportive evaluation processes in FWS. The goals of progress monitoring are to provide the processes and instruments:

1. to assess and record student growth;
2. to diagnose student needs and develop appropriate instructional strategies;
3. to increase the student's awareness of his own interests, abilities, and values.

Integrative Support. Integrative support describes processes for helping the student coordinate his learning experiences; that is, to assist the student:

1. to clarify and consolidate his experiences;
2. to see the relationships among his learning activities, interests, needs, abilities, and values; and
3. to make informed decisions concerning his current and future activities.

Evaluation Plan

Two plans were designed, one for program planning and one for progress monitoring. A test plan was not designed for integrative support because it was felt that judgments about the extent to which integrative support occurred could be made from the data collected under the other two plans inasmuch as the important aspects of integrative support take place in the processes of program planning and progress monitoring.

The two test plans were based on intensive evaluation of planning and progress records from students' files. However, it was discovered that much information critical to the plans was missing from student files or was incomplete: Project Sketches, Project Plans, Resource Person Contact Reports, and other documents necessary to evaluate the procedures. Inasmuch as the files did not adequately reflect students' programs, the test plans were modified. Under the modified plans, a sample of 15 students, five from each learning-coordinator group, was selected randomly. A midsemester file review and an end-of-semester file review were conducted using this sample. In addition, a midsemester questionnaire about program planning was given to a group of students, and three students were interviewed at spring semester end.

Midsemester File Review. The midsemester file review (in late April) was a first attempt to ascertain the completeness of students' files: the number and completeness of Project Plans, the presence of Long Term Plans, and so forth. This review included both learning coordinators' files and central student files. All but one of the 15 students had filed Long Term Plans. However, there were only 15 Project Plans (these were the work of seven of the 15 students) and only seven Resource Contact Reports. Learning coordinators reported that other plans, and perhaps other Resource Contact Reports, were in existence (in students' own notebooks or elsewhere); it was not known how many or in what stage of development.

Midsemester Student Questionnaire. A questionnaire was designed (Exhibit 5-A) to elicit comments from FWS students about their understanding and reaction to program planning procedures/forms (especially long-term planning). This was distributed at an all-student meeting and returned immediately after completion. Twenty-two students present at the meeting completed and returned the questionnaire.

End-of-Semester File Review. After the spring semester ended, the files (both LCs' files and central student files) of the 15 students were again reviewed, this time more thoroughly. They were checked for numbers and completeness of documentation, and some ratings (e.g., the adequacy of goals and objectives on Project Plans) were made.

End-of-Semester Interview. At the end of the spring semester, three students (one from each LC group) were interviewed. An interview schedule was designed (see Exhibit 5-B) but the interviews usually took the form of an informal talk with the student about his spring semester program. The schedule of questions served as a checklist of areas to cover in the interview. As a result of this procedure, the interviews did not focus on the same topics with

EXHIBIT 5-A

MIDSEMESTER STUDENT QUESTIONNAIRE: PROGRAM PLANNING PROCEDURES

Instructions: By answering these questions honestly and specifically (giving examples where appropriate), you will help us assess the usefulness of student program planning procedures and thereby help revise these procedures for future years. For questions related to forms, you will find a copy of the form at the back of the questionnaire. When the questions ask for suggested improvements on the forms, please feel free to mark on the copies provided.

1. What is your understanding of the long-term planning process at FWS? Please explain how this process works, in your own words. Be specific.

2. Why do you think we ask you to go through this process at the beginning of each semester? Be specific in your reasons.

3. Would you say it is reasonable to expect FWS students to make long-term plans at the beginning of each semester? Yes ☐ No ☐ State why or why not.

4. Look over the Long Term Plan provided. Did this form help you make long-term plans? Yes ☐ No ☐ Why or why not?

5. What suggestions do you have for improving this form?

6. Which way do you think would give you better Long Term Plans?
   - ☐ working on them by yourself
   - ☐ working on them with another student
   - ☐ working on them with your learning coordinator
   - ☐ working on them in a small group of students with guidance from your learning coordinator

7. Has your Long Term Plan helped direct your program for the semester? (Has it been a "road map" for you?) Yes ☐ No ☐

8. What were the best aspects of going through the long-term planning process?

9. What were the worst aspects?

10. Did the External Course Description help you plan your program? Yes ☐ No ☐ I didn't need to use it ☐ Any suggestions for improving it?

11. Did the Physical Education Plan help you plan your program? Yes ☐ No ☐ Any suggestions for improving the form?

12. What is a project?

13. In your own words, explain how to plan a project at FWS.

14. Has this process helped you plan and complete your learning activities? Yes ☐ No ☐ Why or why not? Be specific.

15. Would you prefer more or less structure in overall program planning? Explain and give examples.

16. Does the Weekly Activity Schedule help you manage your time? Yes ☐ No ☐ Why or why not? Be specific.

17. Any suggestions for improving the Weekly Activity Schedule?

18. Any other comments you wish to make about program planning at FWS?

EXHIBIT 5-B

INTERVIEW QUESTIONS: END-OF-SEMESTER STUDENT INTERVIEWS

Long-Term Program Planning

What were your main activities during the past year?

How did you come to be involved with these activities?

When in the semester did you decide to do these activities?

How was this decision made? Did you work closely with your LC? How much direction did he give you in this decision? Did he tend to tell you what you needed to do or did he help you decide what you would do? How?

Were your activities this past semester related to your long-range goals and plans?

What were your long-range goals at this time? Did you have any? Were they vague or clear?

Do you think there is any need for a person your age to have long-range goals? Why?

Did anything you did this past semester help you evaluate your long-range goals in any way? How? What was the outcome? How did your LC help you in this process?

Do you think there are other things your LC could have done to help you establish your long-range goals? To plan your semester program? What?

Project Planning

What do you feel was your most successful project this past semester (the most fun, learned the most, gained the most credit, etc.)? Why?

How did this project come to be?

Was it related to a career, a subject, an issue, or something else?

How did you go about planning this project?

Did you have an RP or RO orientation first? With whom?

How did you prepare for the orientation? What kinds of questions were you seeking to answer through this orientation? How did you arrive at them? Did your LC help you prepare for the orientation? Did he help you decide on some questions to answer?

every student. For example, one student had a very productive experience with one particular RP; the talk centered on that experience and did not therefore cover attitudes toward planning, as did the interviews with the other two students.

Results

Student responses on the Midsemester Student Questionnaire revealed less than clear understanding of the long-term planning process and of the project-planning process. Some students did not understand the concept of a project. It is possible that some students did not try to communicate their understanding on the questionnaire.

The end-of-semester file review was intended to judge the adequacy of project planning. A summary of findings follows:

1. Long-term planning did occur. It appears that a process took place whereby early goals were refined or made more specific, some goals were deleted, and other goals added. However, according to the questionnaire and interview results, many students did not have a very complete understanding of the long-term planning process.

2. The evidence of implementation of the short-term planning procedures is less encouraging. According to the records, students (the 15 in the sample) planned an average of only 1-1/3 projects each. Students may well have completed more projects than this, but no records or documentary evidence was found.

   As a rule, Project Plans were below program standards and often did not conform to the definition of a project. Nearly one-third of the 20 Project Plans in the 15 students' files were unrelated to semester goals. Four plans specified no goals and objectives and only six plans were judged to contain enough information to enable the student and his learning coordinator to know when the student accomplished his objectives. Seven of the plans had gotten into the files without the learning coordinator's approval. The level of inquiry reflected in many of the Project Plans tended not to be very substantial; the questions posed by students, and the goals and objectives, tended to be superficial. In many instances, it looked as though the student filled out the forms simply because it was required--without careful thought.

3. The assessment of progress monitoring is similar to that for short-term planning. For example, the fact that only six of the 20 Project Plans bore sufficient information to enable determination of accomplishment of objectives is an indication that progress monitoring was not always complete.

These observations suggest that the prescribed planning process did not always occur, but most students did engage in some activities related to some of their semester goals. The data may reflect, as well, undocumented mid-semester changes in semester plans. But the actual quality (as well as quantity) of students' projects is below program standards as reflected by the relationship to sketches and investigatory questions, the adequacy of statements of what the student was trying to accomplish, and the adequacy of proposed methods of evaluation. On the other hand, the fact that seven of the plans did have goals and objectives that followed from investigatory questions and that six of the plans clearly provided enough information to enable the student and learning coordinator to determine when the student accomplished his objectives, suggests that the prescribed process was feasible.

The three end-of-semester student interviews (May 1974) divulged several problems, all consistent with other information previously mentioned. The problems include: (1) a lack of understanding by some students of the planning process; (2) occurrences of inadequate progress monitoring, including insufficient feedback of progress information to students; and (3) occasions of inadequate use of information acquired through progress monitoring to solve problems in students' programs. One of the three students showed considerable growth related to a number of program objectives. It was clear that help given this student in planning and completing his program was effective. This interview substantiates the fact that the prescribed guidance processes can and sometimes do occur.

The students who were interviewed indicated that they did not receive very much feedback about their work; two said they would have liked more feedback while working with resource people. One reason this did not occur is that learning coordinators did not contact resource people very often. This meant that students did not receive adequate feedback and troublesome situations (such as students having difficulty relating to a resource person or needing certain skills in order to complete a project with a particular resource person) sometimes remained unresolved.

Conclusions

The main finding was that the procedures were inadequately implemented, not that they were ineffective. When implemented, the procedures led to positive results. Five actions were recommended as a result of the evaluation:

1. more complete documentation of the procedures for student guidance;
2. intensive staff review of the concepts and procedures of student guidance;
3. staff training in the skills necessary for guidance procedures implementation;
4. mutual program staff (development, FWS staff) agreement as to the priority of tasks for learning coordinators followed by the elimination/reassignment of tasks of low priority; and

5. continual monitoring of procedures implementation by a senior development staff member during the Performance Test.

During the summer of 1974, these recommendations were implemented to enable more complete implementation during the Performance Test.

1. The comprehensive Student Guidance Handbook was published outlining the philosophy, stating the procedures, and defining the structure of the guidance of student learning within EBCE.
2. Development and instructional staffs joined in week-long sessions of intensive review of the procedures for student guidance.
3. Consultants were brought in to lead training sessions for both new and returning staff members, polishing the techniques useful in individualized, innovative programs for high-school age youth.
4. Position descriptions for learning coordinators and other FWS instructional staff were rewritten to delineate their tasks, responsibilities, and priorities more carefully.
5. A major formative evaluation task for FY75 (see Operating Plan FY75, pages 76-78) will be the monitoring of the implementation of the guidance procedures. This task will be a joint effort of the director of development, the director of operations, and the evaluation group. Since complete information on the feasibility of the guidance procedures is not yet available, such information will be collected and the procedures modified, if necessary, during the next year.

ASSESSMENT OF FWS INSTRUCTIONAL SYSTEM

Four topics are discussed in this section: assessment of students' learning programs, implementation of the instructional system "packages," development and maintenance of learning resources, and the development of the institutional form of Far West School.

Student Learning Programs

Several important questions involving the instructional program were not directly addressed in the formative evaluation of major procedures presented in previous sections. In particular:

1. How effective was FWS in stimulating the students to project activity?
2. To what degree did student projects cause them to meet stated EBCE standards for resource usage and other program activity?
3. What was the overall progress of FWS students toward graduation (i.e., how did their high school credits earned compare to the norm?)

4. Were there discernible differences in the performance of students by groups defined by grade level, sex, or LC assignment?

To answer these questions, diverse information collected through the formative process is aggregated and presented below.

Student Projects

Description. Each student's learning program is planned, focused, and documented by student projects. By monitoring student projects, FWS staff assures that each student is engaged in purposeful, planned, and documented learning activities. These activities are individualized according to students' interests, needs, and abilities; they are also intended to help students achieve broader learning-package and EBCE program goals.

Student programs at FWS ideally would involve the student in several individualized learning projects each semester. These projects would be supplemented by additional basic skills work planned by the student and the FWS skills specialist as an outcome of student diagnosis or student request. The program could include one outside course from a high school, community college, or other community agency. Finally, the program would include a student-planned program of physical education.

At FWS, it is intended that the students spend at least one-half their time in learning-site experiences with resource persons (RPs) or resource organizations (ROs). Student projects are required by the model design to include extended involvement with an RP or RO and to include objectives related to career development.

Though the design prescribes that student projects must include Explorations with RPs or ROs, in practice the inclusion of these experiences in projects was not always possible. There were not always RPs or ROs available in every area of interest which a student might wish to pursue. For example, one student doing a project on human evolution used the Lowie Museum of Anthropology, a community resource, but could not locate an RP with whom she could pursue her study.* Some students are initially hesitant about meeting and working with an unknown adult in the community. Such students were allowed to work on projects, outside courses, or other supplementary activities not requiring such personal contact, while staff at the same time encouraged them to visit RPs or ROs for Orientations. The aim was to find a suitable RP who would motivate the student to establish a learning relationship with a working adult.

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*This proved to be a persistent but not unexpected problem. Thus the staff encouraged students to develop their own RPs when necessary.

Analysis of Students' Performance. Learning coordinators (LCs) were asked to identify for each student the number of projects completed* and, of those completed, the number that included a career Exploration lasting at least ten hours with an RP or RO. The distribution of the number of projects completed by students each semester is shown in Table 5.3.

TABLE 5.3

COMPLETED PROJECTS BY SEMESTER

Number of Students Completing Indicated Numbers of Projects	Number of Projects Completed							
	0	1	2	3	4	5	6	Total
Fall	7	7	8	15	14	3	1	55
Spring	5	9	12	11	11	0	0	48

In the fall a total of 145 projects were completed by 48 students. Of these projects, the LCs reported that 72 (50%) included experiences with RPs or ROs of at least ten hours. However, the data also show that seven students completed no projects and that six other students had yet to complete projects containing Explorations with RPs or ROs. At the end of the first semester, 13 of 55 students had yet to work with an RP or RO for a significant period of time.

In the spring, 110 projects were completed by 43 students. The LCs indicate that 77 (70%) of the projects provided the students at least one resource Exploration. Five students failed to complete any projects during the spring. Additionally, two students who completed only one project each during the spring did not include an Exploration. Thus, 7 of 48 students did not complete a resource Exploration during the spring. Table 5.4 shows the distribution of projects completed by students for the entire year. A significant point to be noted is that only one student completed the school year without finishing at least one project*; this student was also the only student not having at least one resource Exploration during the year. The median number of projects completed by a student was five.

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*A project is counted here as completed if it was sufficiently complete to receive OPS credit under the system described on page 174.

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TABLE 5.4

NUMBER OF PROJECTS COMPLETED BY FWS STUDENTS DURING THE ENTIRE YEAR

	Number of Projects Completed										
	0	1	2	3	4	5	6	7	8	9	10
Number of Students	1	2	3	6	8	8	8	4	5	2	1

Referring to Table 5.5, in the fall veteran students averaged almost one more project per student than new students. In the spring, both groups of students had similar means.

Table 5.5 reveals two significant situations that require explanation: (1) fewer projects were completed per student in the spring semester than in the fall semester, although more credit was earned; (2) veteran students (Group A) slumped badly in their spring semester performance. In discussing with LCs performance of students in projects, it was apparent that the LCs had increased the level of planning and performance required in student projects as their students gained program experience. For example, data previously presented show that the percentage of projects containing resource Explorations increased from 50% in the fall to 70% in the spring. One LC, in fact, did require every project undertaken by his students to contain a resource Exploration. One result of this increase in project quality was a decrease in the overall number of projects through the elimination of less meaningful projects allowed in the fall while students were adjusting to the EBCE learning process. Thus, from Table 5.5, the mean number of projects completed during the semester by first-year students in the program (Group OBC) decreased slightly from fall to spring (from 2.4 to 2.2) although their mean credits earned rose markedly (from 2.2 to 2.9).

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*Several students with low levels of activity in the program during the fall semester dropped from FWS and are not included in these totals. The data on the one student returning to FWS after a one semester's absence have also been deleted. Thus the number of students completing the entire year is 48.

TABLE 5.5

PROJECTS COMPLETED AND CREDITS EARNED BY VETERAN AND FIRST-YEAR STUDENTS

Group	N		Number of Projects				Credits			
			Total		Mean		Total		Mean	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Veteran Students	14	11	47	22	3.4	2.0	38.5	24.5	2.8	2.2
First-year Students	41	37	98	81	2.4	2.2	89.0	110.0	2.2	2.9

The slump in spring performance of veteran students is simply explained. All but two of these students were graduating seniors. Most needed few credits to graduate; many tailored their program activity to meet only their minimum requirements. One of the two juniors had accumulated such an excess of credits in past semesters that she, too, would graduate under a normal level of activity. This she elected *not* to do and sharply decreased her program activity in the spring so that she could continue in school next year. A complete discussion of the amount of credits earned by students during the year is presented later in this section.

Students' Program Activity

Description. The major source of quantitative data on student participation and program activities was the Student Activity Report (SAR) (Exhibit 5-C). The SAR is a weekly report on activities completed by the student. The students' task is to enter brief descriptions of all activities in which he engaged and to enter appropriate hours for each activity. The SAR is divided

EXHIBIT 5-C

far west school	STUDENT ACTIVITY REPORT

Student __________________________ Week of (from)____________ (to)____________

LC's Name __________________________ LC's Signature __________________________

SECTION A Coding: S ▨ LC ▨ D ▨

LEAVE BLANK	LEVEL			TYPE OF RESOURCE			NO. HOURS	PROJ. NO.	PKG. NO.	NAME OF RP, RO, CR
	O	E	I	RP	RO	CR				
▨										
▨										
▨										
▨										
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▨										
▨				HOT LINE RP						

TOTAL HOURS: RP________; RO________; CR________

No. of Hours spent in traveling to and/or from Resource Sites ____________

Student Activity Report (continued)

SECTION B

Enter total number of hours NOT recorded in Section A spent in reading, researching, or preparing project products (e.g., report writing, recording, painting, etc.)

LEAVE BLANK	NO. OF HOURS	PROJ. NO.	PKG NO.	ACTIVITY DESCRIPTION
▨				
▨				
▨				
▨				
Total Hours				

SECTION C

LEAVE BLANK	NO.HRS. SPENT	FAR WEST SCHOOL CENTER ACTIVITIES	
▨		Individual meetings with Learning Coordinator	
▨		Advisory group sessions	
▨		Rap & Other sessions (specify)	1.
▨			2.
▨			3.
▨		Testing	
▨		Workshops (specify)	1.
▨			2.
▨		Tutoring for yourself	1.
▨		(Tutor's name/subject)	2.
▨		Tutoring others	
Total Hours			

SECTION D

LEAVE BLANK	NO.HRS. SPENT	"OTHER" ACTIVITIES
▨		High school course or class
▨		College course or class
▨		Physical education activities
Total Hours		

into four sections of which the first, Section A, covers the use of external resources. Students list each resource contacted, indicate type (RP, RO, CR), and show the number of hours spent at the resource. Section B accounts for time spent in individual activities related to projects, such as reading, research, and report writing. Section C covers activities within the FWS Center, such as group and individual meetings, workshops, and tutoring. Section D covers external classes and physical education activities.

Students were asked to fill out the form on Fridays. The form takes only a few minutes to complete; most information is available on a weekly schedule on which the student has previously planned his activities for the week. The student's learning coordinator signs the report and it is then placed in the student's file.

Analysis of Students' Performance. Participation by a student in FWS should require at least 25 hours per week, the same as that required of a student in OPS who aims to graduate on schedule. Examination of the Student Activity Reports for a typical eight-week interval during the first semester and for the entire 18 weeks of the second semester revealed the information in Table 5.6.*

TABLE 5.6

WEEKLY PROGRAM ACTIVITY REPORTED BY STUDENTS

Number of Students Reporting Activity in the Indicated Interval	Average Weekly Time Per Student (intervals in hours)				
	0-9	10-19	20-29	30-39	40+
Fall	8	8	14	13	12
Spring	3	6	21	13	7

The median during the fall of weekly hours reported by students on the SAR was 28 hours. The table indicated that in the fall, 14 students (out of

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*Though the source of this information is the students and thus might be subject to some exaggeration, the time reports are approved by LCs before submission and should be reasonably accurate.

55) reported average weekly activity within five hours of the desired 25; 25 students reported average time considerably in excess (30 or more hours); and 16 students reported considerably less time (under 20 hours) spent in program activities than desired.

In the spring, the median of weekly hours reported by students was 27. Table 5.7 indicates that 21 students (out of 50*) reported average weekly activity within five hours of intended 25; 20 reported average time in excess of 30 hours; nine students reported considerably less time (under 20 hours) in program activities than desired.

Considering that by the end of the year some 41 of 48 students were participating at least close to or well above the desired level of 25 hours weekly, it would be expected in terms of the model design that the level of resource involvement desired (12 hours weekly, or 50% of student time) would also be met by most students, but this was not the case. The data for fall and spring periods are shown in Table 5.7.

TABLE 5.7

TIME SPENT AT RESOURCE SITES AS REPORTED BY STUDENTS

Semester	Average Weekly Time with RPs or ROs		
	Returning Students	First-Year Students	All Students
Fall	7.5 hours	6.3 hours	6.5 hours
Spring	7.1 hours	6.1 hours	6.4 hours

Using ten hours as representing an acceptable level of weekly activity at resource sites, and four hours as an unacceptable level, the distribution of students may be seen in Table 5.8. In the fall, 19 students reported adequate time at RPs or ROs; and of the other 36 students, 18 reported spending fewer than four hours weekly at resource sites. Reporting was similar in the spring; nine students reported adequate time with resources, and of the 37 other students, 19 reported spending less than four hours weekly at resource sites.

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*Information is presented on 50 students; only 48 of these completed the spring semester.

TABLE 5.8

WEEKLY STUDENT ACTIVITY AT RESOURCE SITES BY GROUP

Level	Veteran Students		First-Year Students		Total	
	Fall	Spring	Fall	Spring	Fall	Spring
Acceptable (over 10 hours per week)	4	2	15	7	19	9
Low (between 4 and 10 hours per week)	6	4	12	14	18	18
Unacceptable (under 4 hours per week)	4	5	14	14	18	19

At the end of each semester each LC was asked to rate each student as either high or low (high = 2; low = 1) in the use of external resources (RPs, ROs, CRs). Each of the three LCs rated all students; the average of the three ratings was assigned to the student (i.e., students were rated high if at least two LCs rated them high; they were rated low if at least two LCs rated them low.) The level of agreement between LCs' perception of students' usage of external resources and the students' own reporting of resource use (via SAR) is shown in Table 5.9. Note that each student self-reporting at least ten hours weekly activity with resources was perceived by LCs as a "high user of program external resources." However, 23 of 37 students reporting fewer than 10 hours weekly resource activity were also judged by the LCs as "high users of external resources." Two explanations are plausible: (1) many students report via the SAR less time than they actually spend with resources, or (2) 12 hours weekly was an excessively high target figure for student-resource interaction as the model was implemented--LCs viewed less resource activity as satisfactory. Examining individual SAR reports reveals cases substantiating the first explanation: many SARs were submitted with incomplete data.

The second explanation will form a hypothesis for the Performance Test during the 1974-75 school year. Data on students' activity will be collected during FY75 and the expected level of resource usage reassessed.

TABLE 5.9

EXTERNAL RESOURCES: COMPARISON OF LC RATINGS WITH STUDENT REPORTS

LCs' Rating of Students' Use of Resources	SAR Weekly Means of Resource Usage	
	10 hours or more	Less than 10 hours
High	9	23
Low	0	14

Credit Earned

Description. A combined performance- and time-based system for assigning credits to students has been developed by FWS and approved by the Regional Superintendents of the Oakland Public Schools. When a student has completed a project, he and his learning coordinator fill out a Student Project Summary Report. The last part of this form asks them to request the amount of credit and the subject area. Together the student and learning coordinator reach an agreement and record it on the form. The Summary, the Student Project Plan and any supporting evidence are then submitted to the FWS director for final approval. He reviews these items and either approves the credit or consults with the student and learning coordinator if he disagrees with the credit assessment. Whenever there is doubt or continued disagreement about credit, the FWS director will call for a meeting between himself, the OPS administrative liaison, the skills specialist, the student, and the student's learning coordinator. Together they will reach a decision. If there are cases where a learning coordinator and student are unable to agree on the amount or type of credit to be assigned, the FWS director will arbitrate. If no agreement is reached, the group will be convened to decide. To ensure that students do not put off completing all projects until the end of a semester, thereby placing a burden on the director who might then be required to review as many as 300 projects, students may submit in advance a maximum of two projects in any one-month period for credit assignment.

Analysis of Student Performance. Table 5.10 shows the distribution of credits earned by FWS students in the fall and spring semesters. During the fall, 55 students earned 127.5 credits, with a mean of 2.34 credits per student. From Table 5.5, page 168, veteran students averaged .58 more units of credit earned than new students during the fall semester. In the fall, veteran students exceeded the norm of 2.5 Oakland Public Schools (OPS) units of credits; new students fell below the norm.*

During the spring, 48 students earned 134.5 credits, with a mean of 2.80 credits per student. However, Table 5.10 also shows that the group of first-year students (Group OBC) increased their mean credits earned sharply to 2.97 during the spring semester. Notice that 17 students earned an abnormally high 4.0 credits. This likely represents reward for full completion of projects started during the previous (fall) semester.

Table 5.11 shows the distribution of credits over the entire year for the 48 students completing the year. The mean value for credits earned is 5.18, slightly greater than the OPS expected value for a year of 5.00 earned credits.**

Group Comparisons of Program Activity

Description. Several variables have been suggested as having impact on the structure and effectiveness of student learning programs in EBCE. In particular, it has been hypothesized that older, more mature students should be more effective in planning/fulfilling projects, in interacting with RPs, and in coping with the considerable program requirements for student responsibility. It has also been suggested that there might be group differences in program performance between males and females. Finally, an influential factor on students' performances is the LC; differences in LC program

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*A student in the Oakland Public Schools must earn 20 OPS units to graduate. To graduate in four years (eight semesters) the student must average 2.5 units per semester. The typical semester class meets one hour daily and earns the student 0.5 OPS units. OPS students typically are enrolled in five classes each semester.

**Note that only one student failed to receive any credits over the year, the same student mentioned earlier who completed no projects.

TABLE 5.10

DISTRIBUTION OF CREDITS EARNED BY FWS STUDENTS, FALL AND SPRING SEMESTERS

OPS Credits Earned	Number of Students	
	Fall	Spring
4.5	0	1
4.0	3	17
3.5	8	3
3.0	7	4
2.5	13	11
2.0	11	2
1.5	7	3
1.0	3	3
0.5	0	1
0.0	3	3

TABLE 5.11

DISTRIBUTION OF CREDITS EARNED, FULL YEAR

Total OPS Credits Earned	Number of Students
8.0	2
7.5	4
7.0	5
6.5	4
6.0	2
5.5	3
5.0	10
4.5	4
4.0	5
3.5	1
3.0	5
2.5	1
2.0	1
1.5	0
1.0	0
0.5	0
0.0	1

philosophy and instructional methods might result in differences among LC groups in program performance. Table 5.12 aggregates mean data by group: included are LC ratings of students' usage of external (e.g., RP, CR) and internal (e.g., workshops, tutors) resources, students' weekly reporting of activity (via the SAR), number of projects completed, and number of credits earned. Data on those students representing cases of limited participation for extra-program reasons (e.g., few credits needed for graduation) have been omitted.

TABLE 5.12

PROGRAM DATA GROUP MEANS

Measure	Grade Level			Sex		Learning Coordinator		
	10	11	12	M	F	A	B	C
LC's External Rating*	1.60	1.42	1.82	1.63	1.60	1.59	1.67	1.59
LC's Internal Rating*	1.56	1.31	1.56	1.60	1.48	1.45	1.62	1.58
Weekly SAR (hours)	7.40	4.22	8.60	7.66	6.13	4.97	9.84	5.98
Credits (year)	5.23	4.35	6.50	5.67	5.37	5.72	5.81	4.44
Projects (year)	5.36	4.92	6.08	5.78	5.19	6.00	5.85	3.89
N	14	12	13	21	18	17	13	9

*High = 1; low = 2.

Analysis of Students' Performance

Grade Level. As shown by Table 5.12 the group of twelfth-grade students has reported the most resource activity (via SAR); the same group has been perceived by the LCs as the highest (of the three grade-level groups) in the usage of external and internal resources. The mean number of projects completed is 6.08, substantially higher than the means for the lower grade-level groups. The mean of credits earned by seniors is 6.50 OPS units, more than one full OPS unit higher than either other grade-level group (OPS expectancy is 5.0 units per year). Clearly, as a group, the FWS seniors performed at a significantly higher level than the remainder of the students. However, this higher level of performance cannot be attributed wholly to greater maturity: seven of the 13 seniors were completing their second year in EBCE; only two non-seniors had a similar length of experience. It is expected that students will perform more effectively as their experience increases in the EBCE learning process. Notice also that the means of the group of tenth-graders exceeds those of the group of eleventh-graders on each of the measures of Table 5.12. All these students entered the program in fall 1973. From these data, there is no evidence to support a hypothesis that older (higher grade-level) students perform more effectively in the EBCE program.

Sex. The means of the group of male students in the EBCE program are higher on all measures of Table 5.12 than the means of the group of females. However, t-tests performed on the respective group distributions show no statistical significance between them for any measure. Thus, although group differences by sex are observed (for example, the mean difference in credits earned between the groups is .30 OPS units, or three-fifths of a normal OPS semester class credit), none of the differences is sufficient to substantiate any hypothesis concerning differential program performance by sex.

LC Group. LCs' perceptions of students' usage of external resources and internal resources do not vary much across the groups (t-tests show differences not to be significant at the .10 level). However, the differences in means across the remaining variables (student-reported hours, credits, projects) are substantial. Students in LC-group C average only 4.44 credits, compared to 5.72 and 5.81 credits for students in LC-group A and LC-group B, respectively. A t-test applied to the distributions of credits earned shows LC-group C significantly different from either other LC-group at the .10 level.

The lower number of credits earned by students in LC-group C is matched by a significantly lower number of projects completed by members of this group (the t-test reveals the distribution to be significantly different from the other two LC-group distributions at the .10 level). Students in LC-group C average fewer than four projects (3.89) while those students in LC-group A and LC-group B average close to six projects (6.00 and 5.85 respectively).

Surprisingly, reports of resource usage by students in LC-group C are not the lowest of the groups. The mean of LC-group B is substantially the highest, nearly twice the mean of LC-group A, the lowest. The t-test reveals a significant difference (at the .10 level) on this measure between LC-group A and LC-group B.

Further investigation of students' projects revealed another interesting fact: every project completed by students in LC-group C contained a resource Exploration (student-resource interaction of at least 10 hours in length); approximately three-quarters of projects by students in LC-group B contain a resource Exploration; one-half of projects by students in LC-group A contained a resource Exploration. Every student except one did accomplish at least one resource Exploration during the spring semester, however.

Evidently, learning coordinator C sets the most stringent standards for including planned, lengthy resource involvement in projects*, as a result, fewer projects are initiated and completed by his students. It appears that the credit-assignment mechanism has translated these fewer projects into correspondingly fewer credits. Learning coordinator B apparently encourages a variety of shorter resource interactions as well as Explorations (thus his students report the highest resource activity). Learning coordinator A allows his students to plan projects without substantial resource interactions as long as each student has at least one project with an Exploration (thus students in LC-group A complete the most projects). Thus, during the past year, there apparently were three differing approaches to student guidance.

Conclusions

The program was successful in stimulating students to project activities. By the end of the fall semester, 48 of 55 students had completed at least one project. As the year progressed, standards for project quality were increased by staff, projects became more purposeful, and the number of projects undertaken by students decreased. Even so, 43 of 48 students completed at least one project in the spring. The mean number of projects completed by students during the year was five; the range was from 0 to 10. Experience proved to be an important factor in student performance: returning students completed more projects than new students; new students' spring performance was better than in the previous fall.

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*Model design states that every project should involve at least one resource Exploration or Investigation.

Students' mean program activity was above the established standard of 25 hours per week. Even so, most students were not spending as much time at resource sites as the model prescribed. Using students' own reports of their activities, the mean of student resource activity was 6.5 hours per week, well under the standard of 12.5 hours (50% of the students' program activity). Learning coordinators seemed satisfied with the amount of student-resource activity; they rated 32 of 46 students as "high users" of external resources. Of these 32 students, only nine approached or exceeded the 12.5-hours standard. This is an indication that the standard for student/resource interaction (50% of student time) is higher than is feasible. This question will be reassessed during the next year. (See Operating Plan FY75, page 77.)

Students progressed toward graduation satisfactorily. The mean of credits earned during the year by students was 5.18, slightly greater than the OPS expected value of 5.0. The individualized nature of the program allowed motivated students the opportunity to accelerate their programs; 13 students earned 6.5 or more credits. As would be expected, several students did not progress satisfactorily; nine students earned 3.5 or fewer credits during the year. Additionally, one student returned to regular high school after the fall semester in which he attempted no learning activity.

There was no statistically significant difference across measures of program activity (credits, number of projects, resource activity) between males and females, or between grade levels. There were significant differences in students' performance when grouped by learning coordinator. The learning coordinators varied in their approach to student project planning, and the differences were observable in the number of projects completed by their students, in the amount of resource activity reported by their students, and in the amount of credit received by their students. Intensive staff training/development sessions held in August 1974 are intended to standardize LCs' approaches to student guidance (see the evaluation of student guidance, earlier in this chapter). The success of this training program in accomplishing a consistent implementation is of primary concern to EBCE during the coming year. A major task of formative evaluation during FY75 is centered on this question. (See Operating Plan FY75, page 77.)

Learning Packages

Description

A learning package is an assemblage of resource persons, resource organizations, and community resources organized around a common set of package goals. The organizing principle may be a career area (such as commerce), or a competence or subject area (such as science) satisfying both Oakland Public Schools (OPS) requirements and student interests. The package is designed to enable a student to identify those learning resources available to fulfill his individual purpose in program planning--whether it be to satisfy a high school graduation requirement, to explore a career area, or to investigate issues of personal concern. The package catalogues resources so that the basic learning unit--the project--can be constructed. In general, each student's use of the package is unique since he incorporates different resources into his own projects.

A learning package offers the student a structured framework within which to make decisions, plan his own learning activities, and identify or develop performance objectives he wishes to achieve as a result of his activities. The learning package also provides staff with a set of package goals, of which all students pursuing projects through the package are expected to achieve some minimum set. The package goals serve as guides to learning coordinators in assessing student projects and determining when they are complete and sufficient in terms of the package. The package provides a mechanism for awarding credit on the basis of performance as well as time.

Students are required to meet package goals in order to receive credit for their projects. A student can complete more than one project in order to fulfill the package goals and he can take as long as necessary to meet them. In this way credit assignment can be based on performance as well as time spent. All students meeting the minimum package requirements receive the same amount of credit. Students seeking additional credit must meet additional goals. As the package concept evolved it became clear that it could serve other purposes basic to the goals and philosophy of the Far West Laboratory EBCE program. For example, school staff had found that students were not always able to share their learning experiences and activities in the advisory group meetings because too many diverse experiences and activities were taking place to interrelate. Learning coordinators suggested that a main function of packages be to form discussion groups that could relate individual student interests and learning activities to the broad issues, concepts, and problems of the specific package career/discipline area.

In short, learning packages and the package discussion groups were designed to be used in conjunction with the entire instructional system's set of procedures to facilitate implementation of those procedures, to simplify project planning in subject areas required by the Oakland Public Schools, and to assure breadth of learning while providing mechanisms and a framework for planning individualized learning activities.

Evaluation of Package Concept

The method of evaluating the package concept was similar to that used in the evaluation of school procedures. First, several packages were assembled, documented, and placed in use within the FWS instructional system. Five packages were assembled: Physical Science, Biology, Commerce, Communications and Media, and Politics. A Test Plan for formative evaluation was then written. Data were collected and analyzed in accordance with the plan. Finally, a Formative Evaluation Report was published. The findings of this evaluation were used in intensive sessions on staff development during the summer months and in revision of the packages for use in FWS during the 1975 school year.

The following techniques for collecting data on package use were used during the spring semester.

1. Learning package discussion groups were tape-recorded and the tapes summarized.
2. Resource persons and organizations were sent review copies of packages in which they were listed.
3. Student files were reviewed at the end of the semester.
4. Students who participated in the packages were interviewed.
5. Package coordinators (LCs) were interviewed at the end of the semester.

Findings

1. In general, early meetings of package discussion groups were well attended, but interest waned after a few weeks. The groups did not fulfill their anticipated role of interrelating the projects, activities, and interests of FWS students. Several reasons are apparent: (1) the LCs designated as "package coordinators" often had new tasks (e.g., student recruitment for fall) added to their already busy schedules; tasks considered low priority were perforce neglected--the infant

discussion groups fell in this category; (2) the LCs did not have a clear idea of how to promote student interest in packages; and (3) the paperwork involved in project planning was allowed to preempt time better used for rap sessions. For each of the five packages, discussion-group activities had ceased four to eight weeks prior to the end of the spring semester.

2. Resource persons and resource organizations were generally positive about the packages. One resource person offered several suggestions for modifying the format of the Communications and Media Package. Some comments were: "it [Commerce] is indeed a profound presentation"; "the [Biology] projects are well conceived"; "it [Commerce] is excellent and most complete"; "an excellent job [Communications and Media]; well organized."

3. FWS staff had varying opinions of the packages. They found the package sample projects very helpful in planning projects; but two of the four staff members (director, three LCs) did not feel the projects helped in assigning credit to projects or in monitoring student progress. The staff seem to have used the packages primarily as a means of cataloguing resources.

4. Students generally felt the packages helped in developing projects. But only one-half of those interviewed felt that the packages stimulated new ideas or that they provided help in basic skills. Most students agreed that the packages were helpful in relating careers to subject areas. Most students also agreed that the resources contained in the packages were sufficient to complete projects, and that the package structure clarified the credit assignment process.

5. Many students attempted package projects without a basic understanding of the package structure. For example, seven students using packages admitted they had not read any part of them; eight students admitted that they had not read the credit-assignment section.

6. There was considerable confusion about when a student was "in" a package. Learning coordinators indicated that certain of their students were working on package projects, yet those students said they were doing independent projects. Other students worked on projects that clearly related to existing packages. These students should have developed projects in accordance with the package goals and participated in package discussion groups, yet they did not.

7. The questions students posed in Project Plans were generally concerned with day-to-day aspects of the program, issue, or organization they were investigating, such as "How is the Berkeley Own-Recognizance Program run?" "Who supplies the money?" and "Where are the Legal Aid Offices located?" Some students did ask more probing questions such as: "How powerful can a union be?" "Does a young person have as much power as an older person in a union?" "What do you have to go through in order to press [rape] charges? Is it worth it?" However, their project goals and objectives seldom indicated how these questions would be answered.

8. A comparison of individual students' package Project Plans to non-package Project Plans revealed no significant differences in depth of questions asked or in quality or adequacy of project goals and objectives. Quality of Project Plans completed varied according to the ability of the student rather than according to whether a package was used. Similarly, differences in quality of project products were apparent among students rather than between an individual student's package and non-package products.

Conclusions

The package concept was not fully implemented during the spring. Nevertheless, sufficient information about package effectiveness was obtained to convince development staff that the concept is sound and to enable meaningful revisions before the 1975 school year. Specifically:

1. It is likely that some confusion over package usage occurred because of the variety of formats used among them. Package formats have been standardized (using the information gained) to minimize the effort necessary for students to use them.

2. Package goals have been restated so that they clearly present (1) requirements in basic skills, problem solving, and career development that are common to all packages; and (2) those requirements peculiar to the specific package.

3. Several of the packages have been augmented by the inclusion of more sample projects. In particular, the Social Science Package (Politics) now includes sample projects indicating the relationship between the American government equivalency required for graduation and the package subject area. The Communications and Media Package is now being augmented by sample projects in the areas of Fine Arts, Performing Arts, and Crafts.

4. Policy has been adopted to require any student project that falls within the scope of one of the package categories to meet the goals of that package.

5. The role of package coordinator, along with the structure and activities prescribed for package discussion groups, was included as a topic under Student Guidance in the staff development sessions during August 1974.

Resource Development and Maintenance Procedures

Preliminary Specification

There were two basic objectives for resource development and maintenance during FY74:

1. to assure that the resource pool be of sufficient size and breadth, in terms of career families and knowledge areas, to facilitate the FWS instructional program; and

2. to define procedures to guide future individuals/institutions in the development and maintenance of resources for an experience-based career education program.

The procedures encompass the following tasks:

1. identifying a need for a resource,
2. locating and recruiting a resource to fill that need,
3. developing and analyzing the potential of the resource for student learning, and
4. maintaining the resource as a program participant.

Resources are recruited, developed, oriented to the program, and maintained by the resource analyst.

Evaluation Test Plan

Procedures to be used in resource contacts were specified at the outset of the 1973-74 school year. These procedures were used to recruit, develop, and maintain the resource pool throughout the year. A test plan for formative evaluation of the procedures was constructed involving intermittent collection and evaluation of data on resource development and usage. The plan is composed of the following six methods of data collection:

1. year-end student interviews eliciting student opinions on the size and breadth of the resource pool;

2. review of records on the amount of usage of RPs/ROs by students;

3. year-end interviews with LCs eliciting information on the sufficiency of resources (especially those related to packages);

4. contacts with all resources to gather their suggestions for improving program procedures;

5. implementing and monitoring a summer resource recruitment/development effort by two untrained staff members following the procedures as written; and

6. submission of the five packages to associated resources for review.

Data collection was accomplished during summer 1974. However, processing and analysis of the data is scheduled for fall 1974, so that the findings reported below are fragmentary.

Findings

At the outset of the past fall semester (September 1973), there were 70 volunteer RPs available for student use. The number was increased to 103 at the start of the spring semester (February 1974). The current figure (September 1974) is 134. In the fall of 1973 there were seven active ROs; the number was increased to 12 in the spring. Currently there are 23 ROs available. Table 5.13 shows the development of the resource pool during the past year.

Currently, the active pool of 134 RPs represents 109 organizations, including 41 commercial concerns and 68 nonprofit organizations. The size of organizations represented by RPs included 10 organizations with 10 or fewer employees, 64 organizations with 11 to 50 employees, and 35 organizations with over 50 employees. of the 23 ROs committed to work with students at the end of the fiscal year, 11 are nonprofit and 12 are commercial concerns; four employ fewer than 10 persons, 11 have between 11 and 50, and eight employ over 50.

TABLE 5.13

RESOURCE PERSON AND RESOURCE ORGANIZATION DEVELOPMENT, SEPTEMBER 1973 THROUGH AUGUST 1974

Type of Resource	Fall 1973			Spring 1974			Summer 1974			Current Pool
	Start	Gain	Loss	Start	Gain	Loss	Start	Gain	Loss	
Resource Persons	70	55	22	103	47	20	130	19	15	134
Resource Organizations	7	6	1	12	10	0	22	3	2	23

The figures of Table 5.13 reveal that over 50 volunteers dropped from active RP status during the past year. Table 5.14 summarizes the reasons for RP loss and indicates the amount of success attained in replacing the withdrawing RP at that site.

TABLE 5.14

REASONS FOR CHANGE IN STATUS OF RESOURCE PERSONS
FEBRUARY 15, 1974 - AUGUST 31, 1974

Reason For Change	9/1/73 - 2/15/74		2/16/74 - 6/15/74		6/16/74 - 8/31/74	
	Number of RPs Dropped	Number of RPs Replaced at Site	Number of RPs Dropped	Number of RPs Replaced at Site	Number of RPs Dropped	Number of RPs Replaced at Site
Changed jobs	9	7	10	3	4	0
Lack of time to work with students	4	2	3*	0	8	1
Students not keeping appointments	0	0	4*	0	0	0
Temporarily inactive or unable to contact	2	0	1	0	2	1
Became RO Coordinators	3	0	4	0	1	0
Another RP at site primarily working with students	2	2	0	0	0	0
Rejected by staff	1	0	0	0	0	0
Deceased	1	1	1	0	0	0

* Three individuals expressed two reasons for their change to inactive status.

The most common reason for withdrawing (23 cases) was a change in jobs. Most other RPs (19) dropped because they lacked the time to work with students. Three RPs expressed two reasons for withdrawing from the program; in each case they were the lack of time to work with students and the failure of students to keep appointments. Learning coordinators continually urge students to inform an RP when a visit must be cancelled. Where RPs did drop it was often possible to replace them with another person at the same site (30 times).

Three resource organizations became inactive in the school during the year. Two dropped for lack of time to work with students. Another, a nonprofit organization, was not refunded.

Development efforts of the staff were directed toward increasing the available RPs and ROs in those career families where resources were scarce. More resources were recruited in the career fields that would help students plan projects in subject areas required for graduation by the Oakland Public School District. Table 5.15 shows the distribution of RPs and ROs by career family in September 1973 and in February 1974. It can be seen that there were increases in the number of career families represented by RPs in all families except construction trades. The number of career families available within ROs also increased.

TABLE 5.15

DISTRIBUTION OF RESOURCE PERSONS AND RESOURCE ORGANIZATIONS BY CAREER FAMILY, SEPTEMBER 1973 TO FEBRUARY 1974

Career Family	Resource Persons			Resource Organizations		
	9/1/73	2/15/74	Change	9/1/73	2/15/74	Change
Engineering, Physical Science, Mathematics, Architecture	14	23	+9	2	3	+1
Medical and Biological Sciences	7	20	+13	1	4	+3
Business Administration	8	17	+9	3	5	+2
General Teaching and Social Science	10	17	+7	1	3	+2
Humanities, Law, Social and Behavioral Sciences	18	26	+8	0	3	+3
Fine Arts, Performing Arts	9	11	+2	0	1	+1
Business, Sales	6	12	+6	2	3	+1
Technical	2	12	+10	4	3	-1
Mechanics, Industrial Trades	2	6	+4	2	3	+1
Construction Trades	1	1	0	2	2	0
Business, Secretarial-Clerical	3	5	+3	3	4	+1
General. Community Services, Public Service	7	13	+6	1	7	+6

* Each unit under Resource Organizations represents a department or division of the organization which may include several employees available to work with students. Many RPs and all ROs represent more than one career family.

Since March 1974, the RPs and ROs have been catalogued by their associated learning packages. Table 5.16 shows how the numbers of RPs and ROs in each package were increased during the spring and summer. Some resources offer knowledge in more than one package area, and so are listed on each application package area.

TABLE 5.16

DISTRIBUTION OF RPs AND ROs BY LEARNING PACKAGE AREA
FEBRUARY 1974 THROUGH AUGUST 1974

Packages	On Hand As Of 2/15/74		Recruited 2/16/74 - 6/15/74		On Hand As Of 6/15/74		Recruited 6/16/74 - 8/31/74		On Hand As Of 8/31/74	
	RP	RO	RP	RO	RP	RO	RP	RO	RP	RO
Commerce	22	4	8	4	30	8	12	1	39	9
Biology	18	3	3	0	21	3	0	3	21	6
Physical Science	22	2	2	2	24	4	4	0	25	3
Social Science	24	5	12	4	36	9	22	4	53	12
Communications Media	23	6	5	0	28	6	11	1	37	7
Resources not included in packages	7	2	16	2	23	4	0	0	23	4

NOTE: Columns do not total, as some resources are included in more than one package area.

Resources available for student projects in the packages range from a high of 65 for Social Science to a low of 27 for Biology. Social Science encompasses the OPS graduation requirements for American government and American history; biology is not required for graduation.

Conclusions

Full assessment of the effectiveness of the procedures awaits analysis of the data collected under the Test Plan. However, early examination of the information suggests that, overall, the procedures are effective in locating, developing, and maintaining the resources required by the FWS program. Two facts point toward this conclusion:

1. the number of resources projected by instructional and development staffs as necessary for the 1975 program have been located and developed; and
2. sufficient resources have been located in the various career families to implement the five packages.

Development of the FWL-EBCE Institutional Form

The institutional form of EBCE encompasses organizational and administrative arrangements that enable the instructional guidance system to accomplish program objectives. The current form was developed during FY74. No test plan for formative evaluation of this development was specified. Rather, the institutional form emerged as a result of deliberations of the Design Control Committee and the Policy Advisory Board. These deliberations ranged from highly specific problem-solving where decisions had immediate impact on FWS, to consideration of policy issues that affect the long-term future of EBCE. As with most management decision-making, problems were occasionally dealt with where no persuasive evidence existed or where conflicting evidence was apparent. In such cases, the long-term EBCE goals were the principal guide, and ambiguity about institutional form was tolerated. Decisions concerning form were sometimes made viewing potential student-learning outcomes as sufficiently important to risk possible future conflicts within the educational system. If continued ambiguity about institutional form would allow future EBCE adopters a wider range of local options, then this flexibility was viewed as desirable; however, flexibility that would permit modification of the major elements of the instructional/guidance system, containing the essence of the EBCE concept, was viewed as not desirable.

School Relationships Requirement

Preliminary Specification. The Operating Plan FY74 discussed school relations largely in the context of working arrangements with the Oakland Unified School District and with the California State Department of Education. The preliminary specification of requirements, therefore, was based upon this relationship and was presented as follows:

Board of Education Control. EBCE, when adopted in whole or in part by a local school district, will fit within the regular decision-making structure of the local board of education.

Separated from High School. Organizationally, EBCE will be a separate entity from, but coequal with, any local high school, even though no new or separate site will be required. EBCE can be operated in office space that is currently under-utilized or in any building owned (or rented) by the district that is not currently fully occupied.

Regular School Counselor. Each student (drawn from grades 10-12) must be "registered" formally at a local high school and be assigned to a regular counselor. If several EBCE students are drawn from a single high school register and happen to be assigned to different counselors at that school, it is advisable that all be reassigned to a single counselor for administrative convenience.

Liaison. EBCE will be subject to an unusual degree of external evaluation for the next few years since NIE is collecting and analyzing a large quantity of data through its contractor, the Laboratory. Hence it is desirable that one school-district liaison person be assigned to temporary "in residence" duty with the EBCE program until NIE-mandated data collection has been completed.

Credits. The school district's list of required course work by grade level will be used as the basis for assigning credits for project activities and products completed by students, after appropriate analysis and evaluation by EBCE learning coordinators.

Graduation. The student who successfully completes the equivalent of all required high school credits will graduate from the Far West School (EBCE-operated) and also from his own local high school.

Attendance. Weekly formal student attendance reports will be compiled and reported to the various "originating" high schools and, thus, to the district office.

Junior College. Each semester a student will be permitted to enroll in one course offered by a local junior college.

Principal. The director (principal) of the Far West School will meet regularly with other district high school principals and serves on the district-wide administrators' committee.

Records Coordinator. The EBCE records clerk will regularly coordinate with central office and high school records personnel, thus assuring continuity and articulation in data processing and record-keeping.

EBCE will feed into and regularly use the district's computer system, employing the usual district format for all transcripts.

Student Body Membership. On an optional basis, each EBCE student will enjoy the privilege of student body membership and activities (e.g., athletic events, dances, and so forth) at his/her original high school.

Senior Counselors. Learning coordinators will give special emphasis to the graduation requirements for each senior to ensure that all basic criteria are being met without any slip-ups.

Library Resources. EBCE students will use both school and public library resources, as well as the modest collection of special materials available in the EBCE resource center.

Policy Board. EBCE has its own Policy Advisory Board which has evolved so as to represent all groups concerned with the program. Representatives will be chosen to represent parents, students, organized labor, resource persons, resource organizations, community resources, and professional and individual entrepreneurs. This board has several goals: helping to recruit new learning resources in the community by suggesting new names and ways of approaching organizations; helping to publicize EBCE in the community so that it will achieve legitimacy; helping to preserve the integrity of EBCE through dynamic tension; and serving as representatives of and sources of feedback to all local constituencies.

Specification Review. The preliminary description of the school relationships was reviewed at the end of the school year, and it still appeared to be an accurate description of the FWL-EBCE model; however, the site-specific nature of the specifications was very apparent. Additionally, the input from the Stakeholders Council and the potential adopters indicated that some variations in school relationships will exist among future adopters of EBCE.

Conclusions. As the detailed outlines were prepared for each of the handbooks which would document the stabilized model, many of the specified school relationships were found to be inherent in the instructional/guidance system; hence, special or additional descriptions were not needed. Two topics, however, did require extensive documentation: (1) the policy advisory requirements were developed separately in another work unit and were included in the External Relations Handbook, and (2) the liaison requirements were documented in the Administration Handbook.

Staffing Requirements

Preliminary Specification. The Operating Plan FY74 included a staffing pattern for the operating unit as follows:

Director of Operations. Manages the Far West School operation and supervises a staff of seven. Has overall technical and administrative responsibility for applying the resources, procedures, and materials of the Far West model to the education of 50 students. Represents the school and EBCE to the business community, the public schools, and parents. Holds California administration credential.

Student Advisors. Each advisor* is responsible for the planning, facilitation, and monitoring of the individual learning programs of 15-20 students in accordance with procedures prespecified by development and evaluation personnel and as approved by the Design Control Committee.

Basic Skills Specialist. Responsible for administration and interpretation of tests of basic skills as well as interest inventories and other diagnostic instruments. Analyzes individual needs in basic skills development and prescribes appropriate supplementary learning activities. Assists advisors in planning individual programs and assessing student progress.

Resource Specialist. Maintains all information files on learning resources, including RPs, ROs, CRs, and instructional materials, and assists advisors and students in selecting and using materials. Assists advisors in facilitating and monitoring learning activities.

Record Clerk. Maintains all information files on students, including school records, diagnostic information, individual learning plans, activities, and progress. Coordinates flow of information from student to advisor, developers, and evaluators.

Specification Review. Early in the school year, the Design Control Committee determined that the staffing requirements needed reevaluation and that more extensive documentation would be necessary to communicate adequately each of the staff roles. While this need was seen for the entire spectrum of positions, it was most evident in the case of the learning coordinator (LC), a job title which replaced the previously used student advisor title. A recruitment effort in August 1973 for a third LC provided important input to the revision and elaboration of staff roles and functions.

During the second quarter, a more systematic review of the staffing requirement was begun. The plan was as follows:

1. The Laboratory's personnel administrator reviewed the personnel file of each operations staff member, and prepared copies of the job description reports of Work Planning Conferences and Performance Reviews. The most valuable part of the file in developing the specifications for EBCE staffing is the report of the Work Planning Conference, a memorandum including:
    a. a statement of present duties and responsibilities;
    b. a statement of the staff member's goals and objectives for the next year;
    c. a statement of the specific criteria to be used in judging performance at the next performance review; and

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*Learning coordinator

   d. a statement of ways in which the staff member might be assisted by the supervisor in achieving the objectives.

2. These documents were reviewed by a senior member of the FWL management team (not an EBCE staff member) who prepared narrative descriptions of the job requirements for the director of operations, learning coordinator, skills specialist, resource center specialist, secretary, and records clerk.

3. During the third quarter, these descriptions will be reviewed and revised by the employees now in those positions, and EBCE staff (with the help of the Laboratory personnel office) will revise the descriptions to fit a standard format. Then the personnel office of Oakland Public Schools will review the descriptions and suggest modifications needed to enable their future use within the Oakland system.

4. Also during the third quarter, an EBCE team from the evaluation and development staffs will review the specifications to determine whether sufficient emphasis is given to the unique EBCE characteristics of staff/student interaction.

The internal review was completed as planned; however, the review by Oakland school staff was done by the liaison administrator and the OPS Director of Pupil Personnel Services, both of whom participated in interviews of candidates for open Far West School positions.

Several additional steps were included in the specification review process. First, three alternative staffing patterns were examined by Far West staff and certain members of the Oakland school staff. They were useful in preparing the Cost-Comparison Study on EBCE Replication (Appendix B). Second, a study of the learning resources information system was done by an outside consultant who examined the career information delivery systems and classification schemes, and also submitted a recommended task analysis of the personnel requirements. This study was believed to be necessary following the FY73 evaluation finding that the resource center was not well utilized. Third, in July 1974 two versions of the LC job descriptions were compared in terms of format, depth of treatment, and amount of detail; one version included much more detail on the guidance function. Fourth, the Design Control Committee gave a special review to the staffing requirements prior to the specification of the FY75 performance test parameters.

Conclusions. The staffing requirements for the Far West EBCE model were specified in detail in the Administration Handbook, and the preliminary specifications were modified as follows:

1. The title, learning coordinator (LC), replaced student advisor, and the staff/student ratio was raised to 25 students for each LC. There was support for this change from all reviewers and from operations staff members; it is believed to be feasible now that LCs need not spend so much time on model development.

2. A new professional position, resource analyst, was added, and the former clerical position, resource specialist, was deleted. This two-part decision was based primarily on the need to increase the resource development and maintenance capability for the instructional staff.

   There was also relevant but conflicting impact from the outside consultant study of the learning resources information system. This study suggested that the under-utilized resource center be enlarged. The consultant's report recommended a system that would have exceeded cost constraints, would have resulted in a center that duplicates existing resources, and would have the effect of directing students inward to the center instead of outward to the larger community.

3. The recorder clerk was retitled recorder, a change to match the Oakland school terminology.

4. The comparison of the two descriptions of the LC staff role by members of the Design Control Committee resulted in a decision to use the version thought to be most useful for recruitment instead of the version which detailed the guidance function.

5. The Cost-Comparison Study (Appendix B) was published showing staffing plan for EBCE programs serving 100, 250, and 500 students each.

Policy Advisory Requirement

Preliminary Specifications. The Operating Plan FY74 did not include preliminary specifications; however, it did include plans and projections for the further development of this important requirement. Preliminary specifications were contained in two internal documents: a staff-prepared draft of a charter and a paper, "Relationships Among Governing and Advisory Bodies, Far West Career Education Program."

Specification Review. The Policy Advisory Board itself was the principal reviewer, and the board deliberations were in fact the formative evaluation activities which resulted in the study of the preliminary specifications and the subsequent step-by-step acceptance, rejection, or modification of the specifications. Major issues reviewed were: (1) how to provide more effective advice to school operations, (2) how to involve EBCE parents and students, (3) size of board, (4) committee structure, (5) effectiveness of meetings; and

(6) breadth of representation. The board established a standing committee on institutional form and gave it the responsibility for study of these issues, requesting recommendations for total board action.

Conclusions. Before the end of the second quarter, significant progress had been made in refining the policy advisory requirements. The staff-prepared draft of a charter was rejected, and a new one was prepared and adopted. Parents and students were represented. Board membership balance (age, sex, and ethnic affiliation) was improved, as was its representation of a variety of careers. The board clarified its purpose as being advisory and not governing.

At the end of the school year, the board had stabilized its operation so that the documentation in the External Relations Handbook could include a section, Policy Advisory Board Strategy, that recommended steps for forming an interim board, and subsequently an ongoing, fully constituted board. The strategy cites successes and failures of the Far West experience, but is also a guide for potential adopters of EBCE.

Chapter 6: Summary and Conclusions

CHAPTER 6: SUMMARY AND CONCLUSIONS

SUMMARY

In the Introduction to this report, seven goals were presented for use in evaluating the Far West School program. Much of the information gathered and analyzed in subsequent chapters has been organized, summarized, and related to the following goals:

1. Student progress in self-development.

    a. Parents of FWS students rated FWS most effective in its ability to develop positive self-attitudes in students and in making students assume responsibility for themselves. Many parents reported student growth in self-confidence, poise, independence, and motivation to learn.

    b. FWS students reported that they are treated as adults and that they like making their own schedules, having freedom and independence, and being free from interpersonal conflict at the school.

    c. Significantly more FWS than comparison students said their self-confidence had increased during the year and that they felt they could express themselves more effectively in a one-to-one situation. More FWS students believed they had learned about themselves because they had had to think for themselves more often, and more FWS students attributed increased self-growth to the activities in the school than did comparison students. FWS students said the school had been effective in helping them assume responsibility and in evaluating their own performance and activities.

2. Student progress in career development.

    a. Significantly more FWS students than comparison students felt that their school had helped prepare them for work, for college, and for making post-high school plans. Almost 90% of FWS students said that school had helped them in planning for their future, while about one-half the comparison students said this. A significantly larger number of FWS students than comparison students reported that they had also talked about their plans with people who were working in fields of possible interest.

    b. Many FWS students have shifted their plans in the direction of "keeping their options open" by continuing education or training. The percent of comparison students who had apparently chosen specific jobs was significantly higher than was the FWS student percentage.

    c. Over one-third of the comparison students said that they saw no relevance of their school program to their plans for the future. No FWS student made such a statement; on the contrary, FWS stu-

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dents rated learning about future careers as the second most important feature of Far West School.

d. Two-thirds of the resource persons said they thought the experiences at the resource sites had been worthwhile for the students and nearly half said that the students they worked with had increased their job knowledge and abilities.

3. Student progress in the development of interpersonal skills.

a. FWS students expressed the opinion that the EBCE experience had been effective in increasing their ability to "communicate with people in a mature way," and to work with others, and had helped them to improve their interpersonal skills. FWS students also rated the school significantly higher with respect to having helped them learn to get along with others than did comparison students in rating their schools. FWS students rated the school higher than comparison students rated their schools with respect to the extent that it helped them meet and deal with people, but the difference was not statistically significant.

b. Of the changes in self listed by FWS students, the kind of response mentioned most frequently was self growth, as indicated above. Second in frequency was interpersonal skills. Other categories were academic learning and future planning.

c. Resource persons, in their ratings of effectiveness of 15 aspects of the program, ranked work with others and improved interpersonal and social skills as among the most effective.

4. Student progress in the development of basic skills.

a. Written communication. On the basis of a writing sample judged for quality by independent raters, FWS students showed a very significant increase in their knowledge of the mechanics of writing, their ability to communicate effectively in writing, and the maturity of their written thoughts. When students rated their school with respect to help received in improving writing, FWS and comparison students did not differ significantly. On an interview rating, FWS students rated the school's help in improving writing low relative to other accomplishments, although they did consider the school's help to be satisfactory. It seems clear that FWS students do improve their writing skills, but there is no reason to assume FWS is either more or less effective than comparison schools in this regard.

b. Reading. Results for reading essentially parallel those for written communication. On a standardized reading test, FWS students did improve their reading skills but not significantly more or less than comparison students. There is virtually no important difference between the two groups with respect to their opinion about how much the schools helped them or how much reading skill they had gained or lost during the year. Again, it seems clear that the FWS experience does not result in any disadvantage relative to students in more conventional high schools.

c. Quantitative skills. The results with respect to quantitative skills for FWS students are essentially the same as for the other two basic skills. FWS student effects are not significantly different from those obtained by comparison students, with the exception that FWS experimental students rated their program as significantly more helpful in mathematics than did the comparison control students.

5. Student progress toward graduation.

The FWL-EBCE approach to individualized curricula was successful in organizing learning activities and facilitating the assessment of student achievement and the awarding of credit. The mean number of credits earned per student was 5.18, where 5 credits per year is required for graduation. One-third of the students who completed the year earned 6 or more credits.

6. Keeping students in school.

a. Sixty-one students were enrolled at Far West School at the opening of the 1973-74 school year and one former student returned at the beginning of the second semester. During the year, seven students transferred from Far West to other high school programs. Three students withdrew from school--one for health reasons, one to travel, and one to take full-time employment. Three students graduated at midyear. At the conclusion of the school year, enrollment was 49.

b. Eighty-five to 90% of FWS students expressed a strong preference for FWS in comparison with schools they had attended previously, and said that if again faced with the choice, they would apply to FWS. The major reasons for this preference can be summarized as: (1) FWS provides much more practical experience and education, (2) FWS allows more individual freedom and responsibility, (3) FWS provides opportunities to learn about occupations, and (4) FWS is much warmer and friendlier than regular schools. When asked to rate school characteristics, 75% of the FWS characteristics were rated positively and none was rated negatively by FWS students; comparison students rated 29% of the characteristics positively and 50% negatively.

7. Achieving community participation and acceptance.

a. People who served as learning resources were generally positive in their statements about the EBCE concept, about the school, and about their own participation. A large majority intend to continue to serve and would recommend to others that they become involved. Only one resource person said he was dissatisfied with the student(s) who had come to his site. More than half of the RPs said they thought the students had made appropriate use of the opportunity provided at a specific site. A frequently cited criticism was insufficient communication with the school. Many resource people also felt that students were not diligent in meeting commitments and taking full advantage of the opportunities offered at the learning sites.

b. Parents of FWS students were generally positive in their statements about Far West School. A large majority stated that if they had the choice to make again, they would want their son or daughter participating in the program. They gave positive ratings to the school staff and to the participating business and community resources. Parents recognized as strengths of the program the essential features of EBCE: experience-based, career-oriented, individualized, and varied involvement with adults. Although parents are highly supportive of EBCE, they tend to retain most of the typical parental concerns about the achievement of community-held views of the purpose of education in American society. Parents seem to appreciate that EBCE inspires new enthusiasm in students about school, but still expect students to learn basic skills and acquire the normal subject-matter knowledge.

c. The Oakland school system is very supportive of EBCE, and its administration expresses interest in the development of entry strategies for bringing EBCE to a larger number of students.

In addition to findings related to stated program goals, certain other evaluation results were presented that are sufficiently important to be emphasized. Some of these findings reveal design or implementation flaws requiring remedial action; in these cases the accomplished or recommended actions are indicated. (Other plans made and actions taken as a result of the evaluation are presented in the EBCE Operating Plan FY75.)

1. Anthropological observations.

From observational data collected over a period of several weeks by two of his graduate students in anthropology, Stanford professor George Spindler concluded that:

a. "The evidence in the report clearly indicates that Far West School is achieving its aims quite well, perhaps extremely well."

b. "Far West students are learning from each other and through casual encounters as well as in their encounters with RPs."

c. "The report contains the beginnings of a total network analysis for the system, but...should be pursued much further."

Recommendations. (1) A more explicit provision should be made in the model for peer-learning opportunities, and (2) the suggested follow-up anthropological study should be conducted in FY75.

2. Staff philosophy.

Key staff members have similar positions on major issues of educational philosophy as defined by the Postman-Weingartner conventions. However, there are significant differences among staff members in the perceptions of actual practice at FWS.

Recommendation. Augmentation of staff training should include attempts to achieve common understanding of key terms and to establish agreed-upon objectives and standards for school operation.

3. Resource development.

Procedures for locating, developing, and maintaining resources were successful. The number of resource persons increased from 70 to 130 and the number of resource organizations from seven to 22 during the twelve-month period ending August 31, 1974.

4. Student activity levels.

Students' mean program activity was above the established standard of 25 hours per week, even so, most students were not spending as much time at resource sites as the model prescribed. Using students' own reports of their activities, the mean of student resource activity was 6.5 hours per week, well under the standard 12.5 hours (50% of the students' program activity). Learning coordinators seemed satisfied with the amount of student-resource activity; LCs rated 32 of 46 students as "high users" of external resources--of these 32 students, only nine approached or exceeded the 12.5 hour standard. This is an indication that the standard for student-resource interaction (50% of student time) is higher than is feasible.

Recommendation. The amount of time spent by students in constructive interaction with resources should be assessed during the coming year. Model design should be reevaluated and based on careful analysis of student outcomes documented during the FY75 performance test.

5. Instructional/guidance system.

All components of the instructional/guidance system were implemented during the year, but with varying degrees of completeness and timeliness.

a. Student diagnosis and orientation did not meet expectations in helping entering students understand and accept the basic processes in EBCE and in providing a solid basis for individual program planning.

Actions taken. (1) Diagnostic procedures have been revised extensively. While similar information is still collected (e.g., basic skills achievement levels, graduation requirements), the lengthy individual diagnostic report was eliminated and various inventories and abilities tests are now optional. Further, the collection and use of such information is now assimilated into the ongoing learning program rather than existing as a separate function. Thus, LCs are able to explain the purposes and nature of tests prior to their use. (2) Orientation procedures were reconceptualized and extensively revised. Activities were restructured to first emphasize FWS-based activities with gradual expansion to resource-site visits. Training sessions for instructional staff in use of student related procedures were designed and conducted prior to the 1974-75 school year and returning students were invited to assist during orientation. Finally, responsibility for resource development and maintenance procedures was transferred from EBCE development staff to the FWS instructional staff and the time period between resource development and student use was reduced.

b. Guidance procedures were inadequately implemented, as indicated by (1) lack of understanding by some students of the planning process, and (2) cases of inadequate progress monitoring and feedback by learning coordinators.

Actions taken. (1) Complete documentation of guidance procedures was accomplished through the publication of the Student Guidance Handbook during summer 1974, (2) intensive review of guidance procedures was undertaken in joint meetings of development and instructional staffs, (3) workshops in implementations skills were held for the instructional staff, (4) task priorities were established for learning coordinators and the position description rewritten delineating tasks and responsibilities and establishing their priority, and (5) monitoring of the implementation of guidance procedures was established as a major formative evaluation task during FY75.

6. Student project planning.

Learning coordinators varied in their approach to student project planning, as indicated by the number of projects completed, the amount of resource activity reported, and the amount of credit received by students.

Action taken. Intensive staff training/development sessions held in August 1974 were intended to standardize the learning coordinators' approach to project planning. The success of this training program in accomplishing a consistent implementation is of major concern to the program during the coming year.

7. Learning packages.

Learning packages were of limited utility to the school staff and to students because (1) not all packages were available at the beginning of the year, (2) packages were being developed and revised throughout the year, and (3) package format and content were not yet fixed.

Action taken. Package format was standardized, package goals were restated to clearly present requirements, additional sample projects were developed, and staff training in use of packages was instituted.

CONCLUSIONS

Several conclusions can be drawn from the information presented in this report.

1. Program development and formative evaluation during FY74 have resulted in a documented, stabilized model for the FY75 performance test. Certain program components (e.g., diagnosis, orientation, guidance) were imperfectly implemented during the 1973-74 development year. Formative evaluation resulted in identification of the deficiencies and revision of model procedures.

2. People serving as resources for FWS were positive in their support of the EBCE concept; sufficient resource persons were located and maintained to enable implementation of the FWS instructional program. Indications are that future EBCE programs can maintain sufficient pools of resources to provide necessary learning opportunities to their students.

3. Students indicated, in questionnaires and interviews, that career exploration was of high interest; however, their amount of activity at resource sites was much less than the 50% of their total time expected. It may be that the expectation of student activity in the field is unrealistic; further evaluation of this feature must be accomplished in FY75.

4. Many students dissatisfied with regular schools see the EBCE program as relevant to their current and future needs. Almost all FWS students express a decided preference for the school over their previous program. Students' performance increased in both quality and quantity of work as they gained experience in the program and adjusted to its requirements for personal motivation, direction, and responsibility.

5. The EBCE program was successful in providing students with opportunities for growth in the areas of self-development and interpersonal skills. Their experiences with resource persons and resource organizations placed them in interactions in the adult world in roles where they were accepted as young adults and as equals. Students and resources alike were enthusiastic about this aspect of the FWS program.

6. The learning of basic skills did not suffer through the elimination of classroom instruction: there was no significant difference in performance between the experimental and control groups--this despite the fact that the remedial portion of the basic skills program was not fully in place until spring 1974. The primary emphasis of the program is on skills acquisition through field experience.

7. Communication between FWS and the various elements of the community must be improved. Resources cite inadequate feedback about the results of their interactions with students; parents cite few meetings with staff and infrequent reports on the progress of their sons/daughters. There is recognition of this deficiency and correction action has been taken. A resource analyst was added to the instructional staff and staff-

development sessions were held during the summer in which emphasis was placed on staff-resource and staff-parent communications.

8. The outcomes of the instructional program were affected by the differences among the learning coordinators approach to student guidance. Significant group differences were observed among students assigned to the three LCs in number and size of student projects, amount of activity at resource sites, and credit assigned. In order to standardize the student guidance within the model, complete documentation of procedures for student guidance was developed, and intensive instructional staff training programs were implemented during the summer.

9. EBCE model developers and evaluators believe that as a result of being in the EBCE program, students will exhibit changes in their attitudes toward the world of work. There is little evidence that this is so. Bringing about changes of this kind has relatively low priority as an objective for students, for parents, and for learning coordinators (though not low for resource persons). No consistent changes were found using items from the Job-Related Attitudes scale. This finding appears unrelated to more positive outcomes noted in other career-related variables.

10. There is a limit to the usefullness for the EBCE program of group data collected in the traditional pre-post, experimental-control group design. One of the departures from this design consisted of anthropological data collected by observations over a period of several weeks. An observed outcome not reported elsewhere has to do with the learning that takes place in peer interactions and through casual encounters with adults.

11. The administration of the Oakland school system, which is formally associated with the FWL-EBCE program, has expressed growing support of FWS and has greatly facilitated the program operations.

12. Further development is needed on instrumentation for measuring EBCE program outcomes.

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